



THE
AUSTRALASIAN
JOURNAL
OF

PHARMACY

THE OFFICIAL JOURNAL OF THE
ASSOCIATED PHARMACEUTICAL
ORGANISATIONS OF AUSTRALIA

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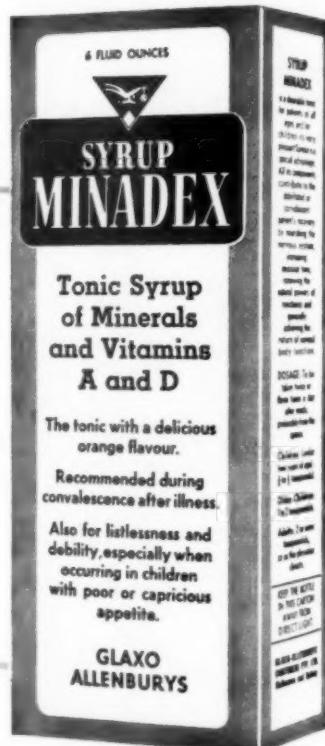
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JOURNAL OF PHARMACY

JULY, 1961

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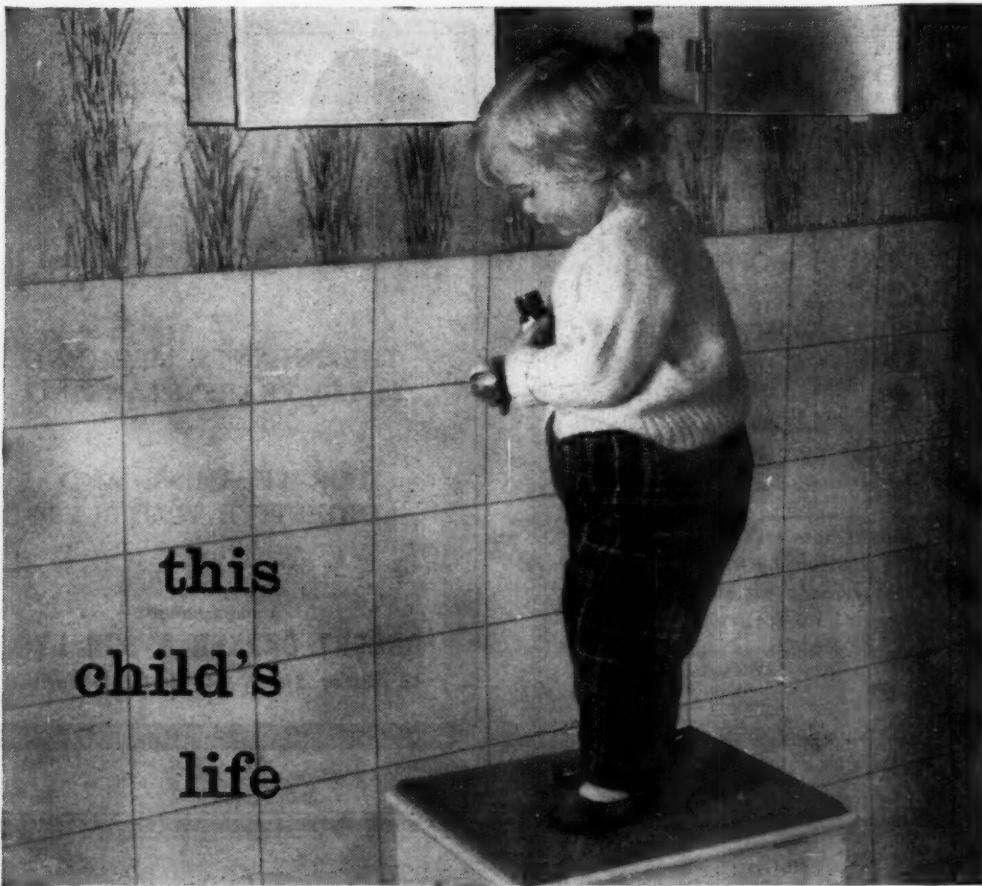
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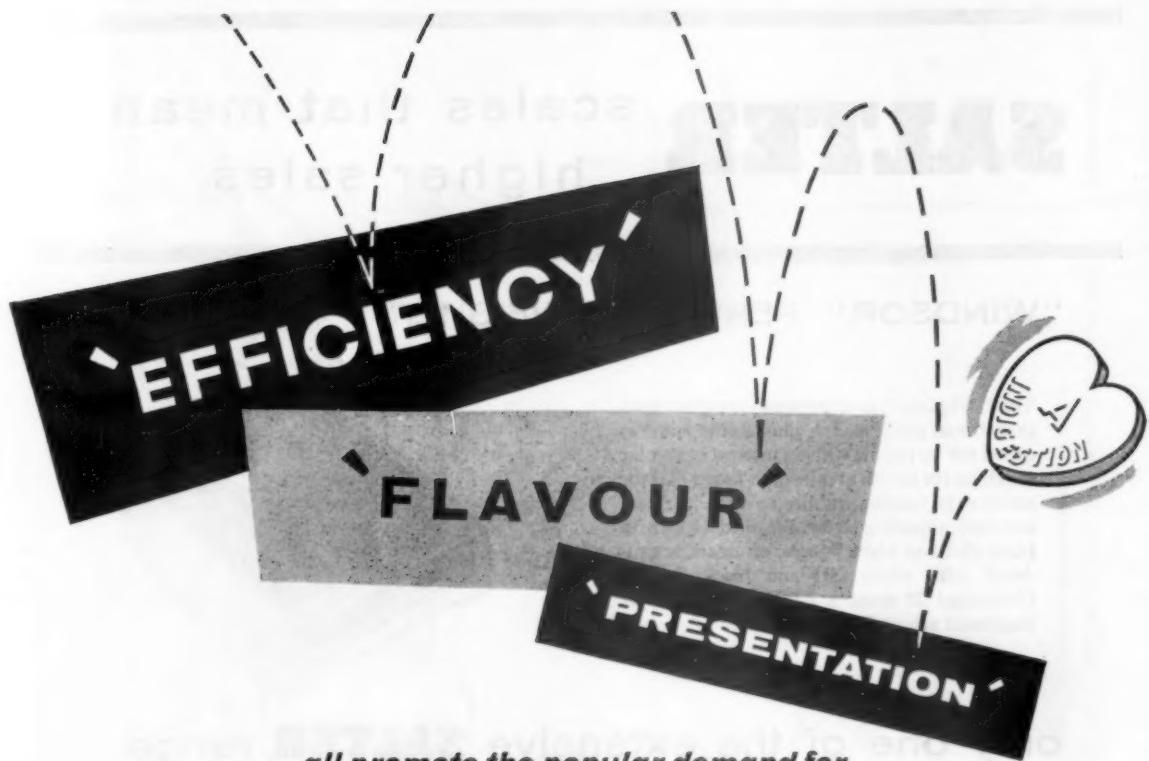
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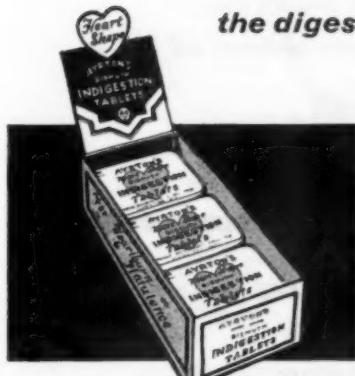
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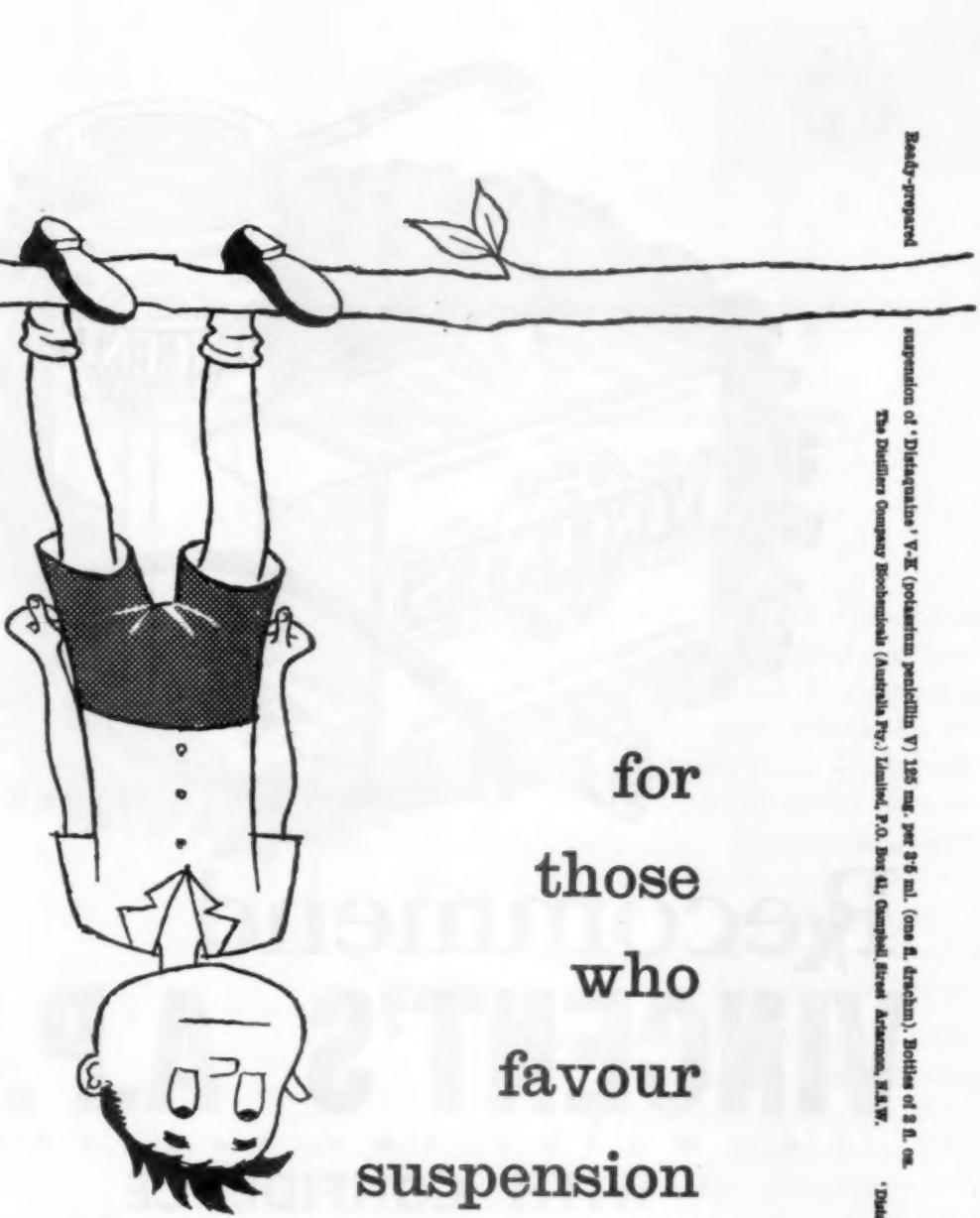
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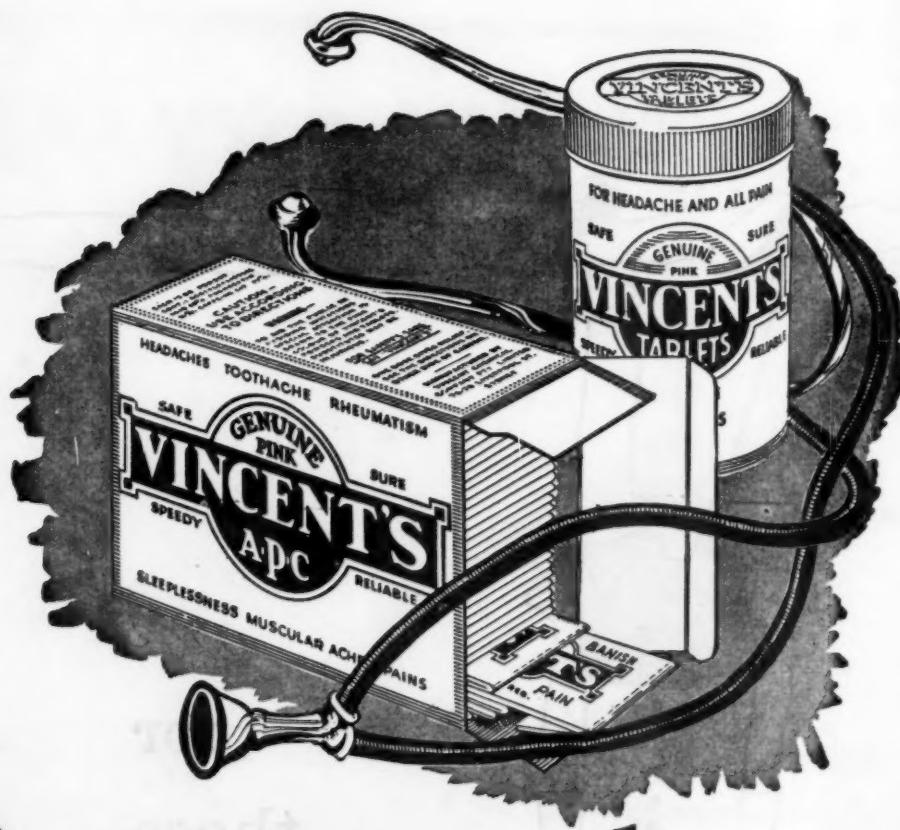
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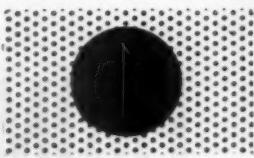
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'RESPAX' is a good product — the result of years of medical research. Thousands of sufferers from hay fever, asthma, bronchitis and the congestion of colds hail 'RESPAX' as a heaven-sent solution. Winter weather will bring you many 'RESPAX' prospects. Display 'RESPAX' well out front, prominently. Your 'RESPAX' advertising and display materials are carefully designed to inform potential customers about the dramatic, new relief they can expect.

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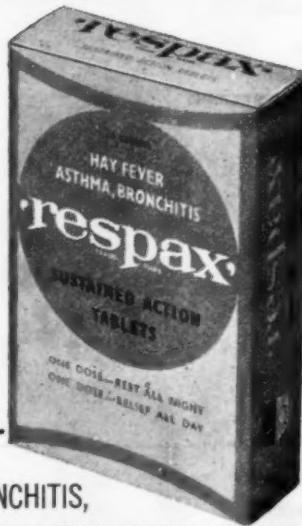
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Publication of Technical and Scientific Articles

Proposal for a New Journal

THE Pharmaceutical Society of South Australia has for several years strongly and insistently advocated that the Journal publish a separate journal containing only technical and scientific articles, reports of investigations and research in the pharmaceutical field.

This is done in the U.K. and in the U.S.A.

"The Journal of Pharmacy and Pharmacology," published by the Pharmaceutical Press, London, and the scientific editions of the "Journal of the American Pharmaceutical Association" are firmly established journals enjoying high reputations in scientific circles throughout the world.

The South Australian proposal has been given very careful consideration by the Committee of Management of the Journal.

The Committee is aware of the advantages and the benefits which can follow the publication of such a journal. They are aware that Australia has reached a stage where considerable development of the research and investigational work within purely pharmaceutical institutions can be expected in the near future.

Tremendous advances have been made in certain fields of scientific research in this country.

Important—even spectacular—success has been achieved in Australia in drug research and new drugs of very great value to medicine have been evolved.

Most of the work in the pharmaceutical field has been done in universities, in the Commonwealth Scientific and Industrial Research Organisation, and in the laboratories of pharmaceutical manufacturers, and most of the results have been published in overseas journals.

The reason for this is two-fold. Firstly, there is no journal which is devoted entirely to publication of reports of workers in pharmacy, which are purely technical; secondly, the belief is widely held that the publication in overseas journals of high standing and circulating to learned societies, research workers, teachers and practitioners, throughout the world brings a greater prestige to authors of papers.

This question of the publication of a separate scientific journal in pharmacy is referred to in the 42nd Annual Report of the Australasian Pharmaceutical Publishing Co. Ltd., recently circulated.

This report states that last year it was noted that the formation of a new association of technical experts linked with Pharmacy was under consideration and that it offered the best long-term prospect of meeting the call for a publication separate from the Journal, and dealing exclusively with technical subjects.

The report indicates that the Committee, after examination of the position, doubted whether there would be sufficient material to provide for a special Science issue of the Journal itself in twelve months. It indicates that at the present time the Committee of Management considers that it would be neither economical nor desirable to publish in a separate journal the range of articles offering, but if a sufficient number of suitable articles were to be received, such material would be published appropriately.

This action, the Committee states, would be taken as a gesture towards the encouragement of research work and publication of the results of that work in permanent form. The report goes on to say that the decision to publish would be made with the knowledge that non-recoverable expenses would be incurred, but with the hope that after one issue has appeared other authors would be induced to offer articles to the journal, rather than seek first publication in overseas journals.

It is thereby disclosed that the Journal is giving active consideration to the question. It is investigating costs and, by enquiry, is endeavouring to ascertain whether adequate material necessary to ensure success can be guaranteed.

It is logical that reports of scientific investigation undertaken by Australian workers should be published in Australian journals. It is timely that serious consideration be given to the South Australian proposition because pharmaceutical research is not an insignificant segment of research programmes throughout the civilised world. The establishment of the pharmaceutical research unit in New South Wales, sponsored and supported by the Pharmaceutical Society of New South Wales, and the stirring of interest in other quarters emphasises this.

It is surely not too much to hope that in the near future there will be in every State of the Commonwealth a realisation that the progress and reputation of pharmacy depends to a considerable degree upon the development of research in conjunction with soundly based educational programmes.



news of
pharmaceutical
events
at home
and abroad

Unpleasant Publicity

Following publication of a letter by Dr. D. O. Crompton in the "Medical Journal of Australia" last month, there was publicity in the daily press which was very damaging to pharmacy generally.

The "Sunday Times," Perth, for example, in its opening sentence said: "People had been sent blind because pharmacists were not preparing sterile eye drops" an Adelaide specialist said this week."

Representatives of the pharmaceutical profession have replied. In a statement published in "The Mail," Adelaide, on July 15, Mr A. A. Russell, President of the Pharmaceutical Service Guild of South Australia, denied that chemists were not carrying out proper sterilisation of eye drops where directed.

He was replying to the statement made by Dr. Crompton.

Mr. Russell said there was absolutely no cause for public alarm which apparently had been caused by publication in the press of Dr. Crompton's statements. Mr. Russell said chemists in South Australia were thoroughly trained and capable of carrying out sterilisation of eye drops. He added that it was the doctor's responsibility to indicate in his prescription that sterile drops were required. Sterilisation had proved necessary only in a very small percentage of cases such as after eye surgery.

The report of blindness caused by contamination of eye drops quoted by Dr. Crompton undoubtedly focuses attention on a subject which is of considerable importance. Adequate provision is not made under the National Health Services for payment of chemists for complete sterilisation of all eye drops. It has been denied by some authorities that this is necessary in every case. If, however, there is the slightest danger of serious injury if sterilisation is neglected, there is an obligation upon prescriber and dispenser to ensure that only safe products reach the patient irrespective of any economic considerations.

Further unpleasant publicity followed the references to the dispensing of eye drops. The "Sun-Herald," New South Wales, in its edition of July 16, published a statement by Mr. R. H. Stewart of Hope Street, Pymble. He was described as having had nearly fifty years experience as a pharmaceutical chemist and as being a member of the Pharmaceutical Society of New South Wales.

His statement that some Sydney doctors had disgracefully unclean surgeries, subjecting patients to the risk

of infection from filthy, unsterilised instruments and plant in polluted premises, was given a very prominent position in the newspaper, and the article was accompanied by a photograph of Mr. Stewart, with a caption below: "I would be afraid to sit on the chairs in some surgeries." This type of rejoinder leads nowhere, and it is regrettable that such ill-founded statements should get into print. The statement was followed by publication of a letter from the President of the Pharmaceutical Society of New South Wales, Mr. J. F. Plunkett, who disassociated his Society completely from Mr. Stewart's statements.

New South Wales Research Trust

The New South Wales Pharmaceutical Society's decision to sponsor a research unit in New South Wales has directed much interest, and has received prominence in the press.

The Sydney "Morning Herald" of July 10, published a conspicuous notice headed: "New Trust Plans £6,000 a Year Drugs Research." The article quoted the President of the Society, Mr. J. F. Plunkett, as stating that the Trust would provide for fundamental research into the use and action of drugs.

It would be named the Pharmacy Research Trust and would operate through the Pharmacy Department of the University of Sydney, under the direction of the Professor of Pharmaceutical Chemistry, Professor S. E. Wright. Professor Wright is a member of the Council of the Pharmaceutical Society of New South Wales.

In his press statement Mr. Plunkett said:

"A good deal of fundamental work on drugs is not attempted by manufacturers who are more interested in developing new drugs for specific purposes.

"We wish to tackle two types of problems—those involving fundamental research and those applicable to conditions peculiar to Australia."

Mr. Plunkett said the trust might provide for:

- (a) A study of the mechanism of drug absorption to see if it could be improved and drugs thus be made more effective.
- (b) A search for forms of drugs which were not destroyed when taken by mouth.
- (c) A study of the action of drugs on the various organs of the body and modification to improve that action.

- (d) A study of drug deterioration rate under Australian conditions, such as a study of the length of retention of potency in high temperatures and high humidity.

Retail Sales in Australia—Latest Figures

Figures recently released by the Commonwealth Bureau of Census and Statistics indicate that up to the end of the March, 1961, quarter, the statistical curve showing the volume of retail sales maintained the upward movement which has been in evidence for a considerable time.

The figures are compiled from returns taken from a typical group of retailers in all sections of the retail trade, excluding motor vehicles, parts, petrol, etc.

The figures given are reproduced hereunder:

Value of Retail Sales and Percentage Increase Over Previous Corresponding Quarter—Australia (a)

Quarter	Total Value of Retail Sales of Goods (excluding Motor Vehicles, etc.) (£ million)	Value of Corresponding Quarter of Previous Year.	Percentage change %
1957-58: September	557		+ 4
	648		+ 4
	560		+ 5
	579		+ 4
1958-59: September	585		+ 5
	675		+ 4
	580		+ 4
	614		+ 6
1959-60: September(b)	626		+ 7
	731		+ 8
	639		+10
	676		+10
1960-61: September(b)	679		+ 8
	777		+ 6
	662		+ 4

Contracts for Drugs Under the Patents Act

The Association of British Pharmaceutical Industry, London, has published the following statement:

We view with grave misgivings the decision of the Health Ministers to use Section 46 of the Patents Act as a basis for Government purchase of selected drugs for the Hospital Service. If this has the effect of so reducing prices as to make prohibitive the maintenance of research and development expenditure, we believe that it will be impossible for the industry to maintain its international competitive position. We consider, therefore, that it is essential for satisfactory administrative procedures to be agreed between the Health Departments and the industry to ensure that the originator of a new product receives an adequate reward for the Crown use of his invention.

The Association of the British Pharmaceutical Industry is undertaking a full study of all the implications of the Minister's action, and will issue a further statement in due course.

Red Cross as Symbol—Historical

Dr. T. D. Whittet, Chief Pharmacist, University College Hospital, London, is making an investigation into the use of the red cross as a medical and pharmaceutical symbol before and after the Geneva Convention 1863.

It was used in Great Britain by apothecaries and chemists and druggists as early as 1750 and as a plague symbol from about 1550.

Dr. Whittet would be interested to learn of its use as symbol or trade mark in Australia and to be furnished with references thereto.

Wages in New Zealand

Wages increases ranging from 10/10 to 17/7 for adult workers are contained in the new award for retail chemists' assistants in New Zealand (except Otago and Southland), reports "Press" of Christchurch, New Zealand. The award, which came into force on June 21, is to continue in force until December 21, 1962.

Managers under the ward receive an increase of 15/4.

Relieving Managers 17/7

Qualified Assistants 13/9

Relieving managers or assistants required to live away from their permanent homes will receive a board allowance of £5 per week, or the employer may provide board and lodging in lieu thereof.

The British Pharmaceutical Conference—An Innovation

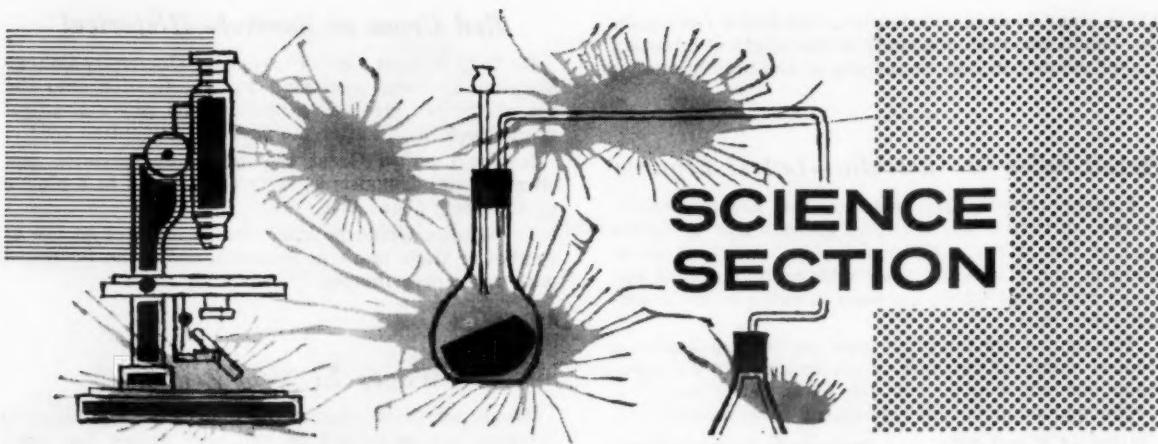
The ninety-eighth meeting of the British Pharmaceutical Conference will be held at Portsmouth in September, 1961.

At this conference an innovation is to be introduced. This will be the inclusion in the programme of a "Conference" Lecture."

The lecture this year will be by Alick Isaacs, M.D., of the Department of Bacteriology and Virus Research of the National Institute of Medical Research, London. His subject will be "Interferon," about which we include the following notes:

There is a growing evidence that Interferon plays an important role in our ability to recover from viral infections. Long-term immunity to second infections is due to the production of specific antibody, but the antibody mechanism seems to be much less important in our ability to recover from virus infections. In seeking to use Interferon therapeutically in man we are therefore trying to enhance a normal protective mechanism, rather than introducing a foreign substance into our bodies. "Interferon" appears to act by inhibiting an oxidative mechanism which furnishes the energy for viral synthesis.

The Medical Research Council and three pharmaceutical firms are collaborating in an attempt to develop research on Interferon with reference to the possibility of its use in man.



Edited by A. T. S. Sissons, B.Sc., F.P.S.

DRUG UPTAKE AND DRUG RESISTANCE IN MICRO-ORGANISMS

Jean Youatt, Department of Bacteriology, University of Melbourne.

(A paper read at the Brisbane Meeting A.N.Z.A.A.S., May 1961.)

Drug uptake is one aspect of the general phenomenon of transport of chemical compounds into cells. It is necessary to indicate at once that the use of this word "uptake" is in a very broad sense. A description of some of the methods used for the measurement of drug uptake will show how necessary it is to consider always the context in which the word is used.

Measurement of drug uptake

1. Use of radioactive compounds: When a drug is available with a radioactive isotope this provides one of the best methods for the measurement of drug uptake. The experimental procedures are relatively simple and the sensitivity is greater than in most other methods. Even when the drug has undergone some change within the cell it is still possible to detect its presence. In this type of experiment the word "uptake" means binding of radioactivity in the presence of the radioactive drug. The simple uptake experiment does not indicate where or how the drug is bound nor whether it has undergone chemical change in the process. Some of the anti-bacterial drugs which have been available with radio-isotopes are S^{35} penicillin^(a), S^{35} sulphamamide^(a), C^{14} isoniazid^(a), C^{14} p-amino salicylic acid^(a), C^{14} streptomycin^(a) and C^{14} aminopterin^(a).

2. Absorption spectra: The concentration of a drug remaining in the suspending medium after exposure of bacterial cells to the drug can be determined by the light absorption at a characteristic wave-length. This method also includes the use of colours developed by the addition of suitable reagents. In this context the measured "uptake" is actually the loss of drug from the solution. This method was applicable to the measurement of proflavine uptake in the work of Peacocke & Hinselwood^(b) and Margaret Gibson (unpublished). These workers plotted absorption isotherms for uptake of proflavine by bacterial cells and confirmed their results by showing the reverse process on dilution.

More often the drug uptake is not fully reversible in this way, and several important sources of error must be avoided. Many compounds diffuse out of bacterial cells, some are products of the cell metabolism, some

may be released from autolyzing dead cells in the suspensions. It is possible to put up controls for the leakage of cell components in the absence of the drug but not in its presence, and many drugs will effect the release of compounds from the cells. Chromatographic examination of the supernatants is the best method of establishing that no interfering compounds are present.

It is also necessary to establish that the drug has remained unchanged in the supernatants of the cell suspensions. If the drug is broken down by the cells then falsely high "uptake" values may be recorded.

3. Other physical methods: Few & Schulman^(a) followed the loss of polymyxin E from bacterial supernatants by measuring surface activity with a surface balance. The polarograph was used for experiments with chloramphenicol^(a).

4. Microbiological assay: Microbiological assays are time consuming and have mainly been used with antibiotics of which the chemical characteristics were unknown and other methods were not available for estimation. Videau^(a) used this method for measuring the uptake of the antibiotics penicillin, streptomycin, tetracycline, oleandomycin, novobiocin, spiramycin, carbomycin, streptogramin and erythromycin.

5. Indirect methods: The isomers of isoniazid, nicotinic and picolinic acid hydrazides do not inhibit Mycobacteria in the low concentrations at which isoniazid was effective. Other methods for measuring their uptake were not applicable, but indirect evidence was obtained by measuring the uptake of C^{14} isoniazid in the presence of these hydrazides^(a). Since they inhibited isoniazid uptake there was evidence that they were themselves being taken up by the cells.

Another indirect method has been used to demonstrate that drugs were not taken up by resistant cells. If the drug inhibits an enzyme in cell extracts of resistant cells but not in whole resistant cells, this provides an indication that the drug cannot enter the resistant cells. Anton & Nichol^(a) reported an experiment of this kind with 4-amino-10-methyl pteroylglutamic acid. There are conditions where experiments such as this could be misleading. Resistant whole cells might destroy the drug, whereas cell extracts could not do so. Alternatively, sensitive cells might modify a drug to an active form, while resistant cells lacked the ability to effect this conversion.

It will now be clear that the measurement of drug uptake requires considerable care both in the experimental work and in the interpretation. It is also highly desirable to know something of where the drug is bound in the cell and whether it is metabolised. The

location of the drug in the cell has been most readily established for compounds which are bound at the cell wall or cell membrane such as penicillin^m, surface active agents^m and proflavine^m. p-Aminosalicylic acid is synthesised into an analogue of folic acid^m. With radioactive tracer techniques and the newer methods of preparing cell fractions, cell walls, protoplasts and mitochondria it may be possible to locate drugs after they have been bound by the cell.

Drug uptake by resistant organisms

Drug resistant cells often show a much lower uptake of drug than the corresponding sensitive strain. The effect is usually quantitative, and the resistant cells will show increasing drug uptake with increasing ex-

ternal concentration. Yeast cells^m, of 4-amino-10-methylpteroylglutamic acid by *Streptococcus faecalis*^m and sometimes with penicillin^m, though penicillin resistance clearly depends on more than one factor.

Increased uptake of drug has been reported for sulphamamide^m, p-aminosalicylic acid^m and proflavine^m. Sulphanilamide appears to be less firmly bound by resistant cells than sensitive cells. It has been suggested that p-aminosalicylic acid is metabolised by sensitive but not by resistant organisms^m. However, there is no satisfactory explanation of the increase in the amount of drug bound, nor is it clear whether this observation is directly related to the resistance of the organisms.

Cell transport mechanism

Proflavine^m and polymyxin^m are taken up by a physical absorption in the cell surface. In most cases little is known about the transport mechanism. Some drugs are taken up by an "active transport," if we may define active transport as one shown only by actively metabolising cells. Nystatin^m and aminopterin^m are taken up more rapidly with increasing temperature to 37° and in the presence of glucose. Isoniazid uptake requires the presence of oxygen and is inhibited by NaCN^m. Penicillin is taken up more by growing cells than resting cells, but other effects than active transport could account for this.

The uptake of isoniazid by isoniazid-resistant Mycobacteria

Following this general outline on drug resistance, an outline of some experiments I have done with isoniazid may serve to give a clearer picture of what one encounters in this kind of work.

Resistant strains of *Mycobacterium tuberculosis* (B.C.G.) can readily be developed which will grow in the presence of 60-100 µg/ml. of isoniazid, whereas the sensitive parent strain is inhibited by 0.07 µg/ml.

Barclay et al.^m recorded that C^{14} isoniazid was not bound by growing cultures of isoniazid resistant Mycobacteria. I confirmed this with washed cell suspension as shown in Figure 2. However, on longer exposure to C^{14} isoniazid the resistant cells also became radioactive. Paper chromatography of supernatants and cell extracts of organisms which had been exposed to C^{14} isoniazid showed that isoniazid was being broken down by sensitive and resistant cells. Sensitive cells broke down isoniazid to isonicotinic acid and 4-pyridylmethanol, while resistant cells produced only isonicotinic acid^m. With cell-free extracts of sensitive and resistant B.C.G. the products of isoniazid metabolism were the same as in whole cells. These observations suggest that resistance to isoniazid in B.C.G. is not solely due to a difference in the permeability of the cell membrane. The simplest theoretical explanation of these observed differences in sensitive and resistant cells is that the location at which isoniazid is destroyed is different in the resistant organism. This will have to be investigated.

The chromatographic examination of supernatants of organisms exposed to isoniazid illustrates very well some of the difficulties I outlined earlier. Isoniazid is broken down by most suspensions within 24 hours. If uptake were followed by a colour reaction for isoniazid in the supernatant the results would suggest 100% uptake in 24 hours, whereas the radioactivity bound indicates 10-20% uptake. The presence of isoniazid has been found to influence the leakage from cells of amino acids and keto acids, but more striking still is the release from sensitive cells of a number of compounds which are coloured or which fluoresce under ultraviolet light^m. One of these compounds shows the chemical and chromatographic characteristics of riboflavin and stimulates the growth of *Lactobacillus helveticus* in a riboflavin-free medium. This phenomenon is to be investigated quantitatively in order to determine its relationship to isoniazid action. The production of coloured compounds in the presence of isoniazid is not found with other anti-tuberculous drugs nor in the presence of resistant B.C.G., and it is tempting to suggest that these compounds released in the presence of iso-

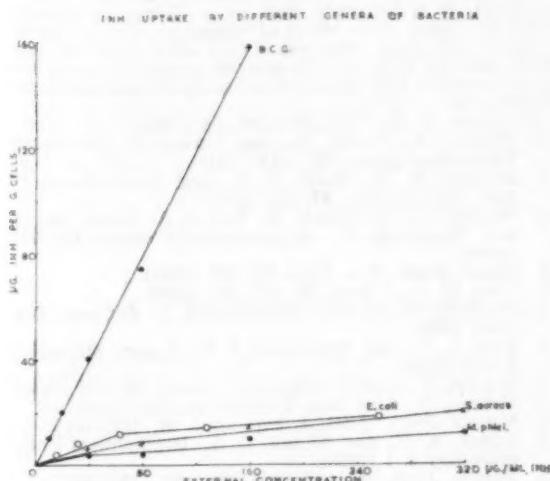


Fig. 1

ternal concentration. Figures 1 and 2 illustrate the reduced ability to take up isoniazid in resistant organisms^m. Figure 1 shows the uptake by naturally resistant organisms *Escherichia coli*, *Staphylococcus aureus* and *Mycobacterium phlei* compared with a sensitive strain of B.C.G., while Figure 2 compares the uptake by sensitive and resistant strains of B.C.G.

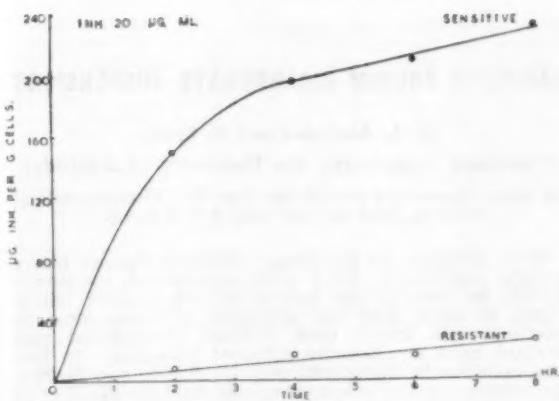


Fig. 2

Some other examples of reduced drug uptake in resistant organisms are found in the uptake of Nystatin

niazid are related to the synthesis of flavines. Unfortunately they are rather unstable and difficult to isolate, and it has not yet been possible to identify the pigments.

Hydrazones of Isoniazid

Hydrazones of isoniazid attracted some attention for clinical use because of their lower toxicity compared with isoniazid itself. Unfortunately cells resistant to isoniazid are also resistant to the hydrazones. The uptake of radioactive verazide (the hydrazone of veratic aldehyde) showed that resistant cells bound as much radioactivity as sensitive cells. The uptake no longer involved an active transport, since verazide was bound by living and dead cells, in the presence and absence of oxygen, and its uptake was not inhibited by NaCN. As further evidence that the transport mechanism was different, verazide did not inhibit the uptake of C^{14} isoniazid. Chemical tests showed that verazide was also broken down by cells but at a slower rate than isoniazid. The hydrazones require further investigation before we can explain why the resistant cells resist the drug while binding and metabolising it in a way which appears to be the same as for sensitive cells. This may be a question of where the drugs are bound in the cells.

Stimulation and Depression of Isoniazid Uptake

There is also clearly much scope for further examination of stimulation and depression of isoniazid uptake by other compounds. I have referred to the inhibition of isoniazid uptake by nicotinic, picolinic and benzoic acid hydrazides. (Figure 3.) It appeared from these

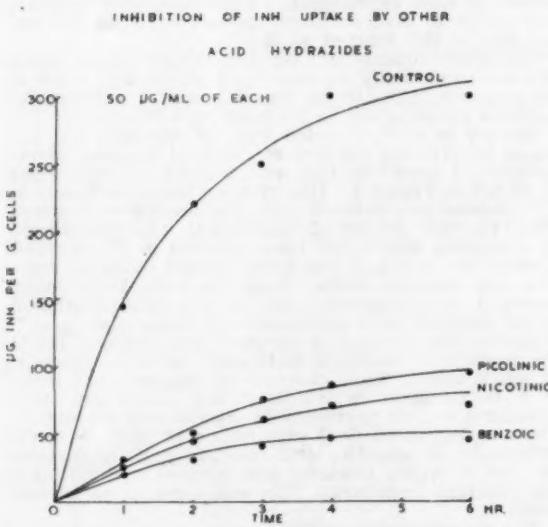


Fig. 3

results that conditions could be chosen where the presence of these hydrazides below their own toxic levels could antagonise the action of isoniazid. Reports of such experiment were found in the work of Erlenmeyer & Roth⁽¹⁰⁾, who also reported that copper reversed this antagonism. They found that copper, in the presence of the two hydrazides, prevented the development of resistant strains.

With C^{14} isoniazid I was able to show that copper stimulated isoniazid uptake in sensitive and resistant B.C.G. The resistant strain showed increased sensitivity to hydrazides in the presence of copper. The role of copper is not at present understood. Isoniazid uptake is not inhibited by the chelating compounds, 8 hydroxy-quinoline (oxine), ethylenediamine tetraacetic acid (versene) or o-phenanthroline.

These results show, I think, that the mechanism of drug resistance may not be at all simple even when the

measurement of drug uptake has suggested that resistance depends on impermeability to the drug. The influence of other compounds in the uptake of drugs should be investigated further. There may be advantages in modifying a drug chemically if by so doing the transport mechanism by which it enters the cell is also changed. Thus, while isoniazid is bound most effectively by metabolising cells, verazide and other hydrazones are equally well taken up by non-metabolising cells. Thus in spite of the instability of hydrazones of isoniazid in blood which has been reported⁽¹¹⁾, they may yet be of some clinical value in attacking non-metabolising cells. The uptake of hydrazones by B.C.G. is complete in half an hour, whereas the half-life of verazide in blood is 2-4 hours, and since the three hydrazones which were tested were of varying stability in blood, it is probable that more stable hydrazones could be found. The effect of copper on the uptake of isoniazid by drug resistant B.C.G. also suggests that there may be practical advantages gained by more detailed study of the uptake of drugs by micro-organisms.

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SAMPLING SODIUM BICARBONATE SUSPENSIONS

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(A paper presented before Section "O", Pharmaceutical Science, Brisbane Meeting A.N.Z.A.A.S.)

The difficulties of accurately sampling sodium bicarbonate suspensions have been emphasised by Smith (1959); he records the results of one analyst which claim to show that the strengths of three separate portions into which each original prescription was divided have significantly different strengths. In fact the variation in the results may be due to two factors. In addition to the errors from non-uniform division of the suspension into three portions, further errors will probably result from techniques used to assay the portion. Smith's results for the pairs of assays carried out on each portion (after division) support this opinion. As a prerequisite to any investigation of possible

methods of getting representative portions, it is necessary to have a reliable method of determining the strength of each portion and to have an estimate of the errors likely to arise in assaying this portion.

Part I: Sampling by Weight

Preliminary experiments using pipettes to obtain 10 ml. lots of suspension for analysis showed that it is virtually impossible to get a representative aliquot by using a pipette in the usual way.

The first part of this paper sets out the more consistent results obtained when suspensions of sodium bicarbonate of various strengths were sampled by weight.

Method: Accurately weighed amounts of reagent grade sodium bicarbonate were transferred to a tared graduated flask and made up to 100 ml. The weight of the 100 ml. of suspension was determined and the weight per ml. calculated at 19-22°C. This suspension was transferred with frequent shaking to an approx. 200 ml. stoppered bottle through a wide-bore funnel. The suspension was sampled from this container after vigorous shaking by quickly pouring about 10 to 12 g. into a tared, covered, dry beaker, which was again weighed. It was essential to immediately cover the beaker to prevent losses by evaporation during weighing. The amount of sodium bicarbonate in the sample was found by titration with N/1 acid using methyl orange as indicator.

The results are summarised in Table 1.

TABLE 1
Strength of Sodium Bicarbonate (as Per Cent. W/W) in a Range of Suspensions

Overall Strength of Mixture	20.00 g./100 ml. wt/ml. = 1.109 g.	16.00 g./100 ml. wt/ml. = 1.091 g.	14.01 g./100 ml. wt/ml. = 1.081 g.	12.00 g./100 ml. wt/ml. = 1.072 g.	Saturated Solution wt/ml. = 1.060 g.
Order of Assay					
1	17.78	14.73	13.19	11.03	8.69
2	17.86	14.63	12.85	11.02	8.70
3	17.93	14.56	12.92	11.07	8.86
4	17.82	14.60	12.95	11.10	8.68
5	18.26	14.68	13.12	11.13	8.69
6	18.10	14.85	13.13	11.10	8.73
7	18.45	14.48	13.15	11.24	8.73
8	18.58	15.14	13.10	11.23	8.73
9	18.65	15.43	13.39	11.34	8.78
Mean of 9 Assays	18.16	14.79	13.09	11.13	8.73
Standard Deviation	0.34	0.31	0.16	0.11	0.05
Coefficient of Variation	1.9	2.1	1.2	1.0	0.6

Discussion: These data show that even when what correspond to previously divided portions are assayed by the improved method described above, the discrepancies are considerable. Comparison of the variations resulting from analyses of the saturated solution with those resulting from analyses of the suspensions, show that with suspensions of the usual strengths the errors are two to three times greater than those resulting from the usual kind of titrimetric assay. The results in the Table indicate that the method of sampling suspensions by weight might be expected to give nineteen out of twenty results within about 3 per cent. of the true strength of the portion. An average of two assays might be expected to yield results which fall within about 2 per cent. of the true strength for nineteen out of twenty samples. A slight increase in accuracy would be expected when larger amounts of sample are taken for titration.

In general, the first quantities taken for assay contain less of the suspended material than later quantities, and this suggests that a result more representative of the whole portion is more likely to be obtained if the first section is rejected, and if quantities for assay are then taken from the "middle" of the portion.

Although the determination of strengths as weight in

weight percentages will be entirely adequate for the second part of this study, it is less convenient for checking the accuracy with which sodium bicarbonate suspensions have been dispensed. When w/v percentages are required from w/w results, it would be necessary to determine the weight per ml. of the suspension. Table I shows only small changes in weight per ml. for appreciable changes in concentration, and so sufficiently accurate determinations of the weight per ml. should not be difficult.

Part II: Dividing the Suspension

A selection of sodium bicarbonate mixtures similar to those used by Smith was obtained by asking pharmacy students to prepare 8 fl. oz. of a suspension containing 480 grains of sodium bicarbonate; they differ from those used by Smith in that the liquorice and chloroform were omitted.

Method 1: Each of twelve mixtures was divided into three portions as follows:-

The 8 fl. oz. bottle was vigorously shaken and about one-third poured into a dry 4 fl. oz. medicine bottle through a dry, wide-bore funnel by inverting the 8 fl. oz. bottle above the funnel; this first portion is identified under "portion A" in Table 2. A second portion was transferred into a second 4 fl. oz. bottle in the same way after further shaking and identifying as "portion B." The remainder was left in the 8 fl. oz. bottle as "portion C."

Each portion was then assayed as described in Part I by weighing two 10 to 12 g. samples. The mean result of the two assays is shown in Table 2.

TABLE 2
Strengths as Per Cent. W/W in Separate Portions of Sodium Bicarbonate Suspensions

Code No. of Mixture	Portion A	Portion B	Portion C
1	13.3	12.7	12.6
2	13.4	13.0	13.2
3	13.0	13.0	12.6
4	12.9	12.8	13.2
5	11.3	11.5	11.8
6	13.3	13.3	12.6
7	13.2	13.2	13.4
8	13.6	13.3	12.8
9	13.5	13.5	13.5
10	13.0	12.7	12.4
11	13.4	12.7	12.5
12	12.7	12.5	12.4

Method 2: A further twelve mixtures were taken and each divided into three portions as follows:-

The 8 fl. oz. bottle was vigorously shaken and the

suspension transferred through a wide-bore funnel to a dry 10 fl. oz. bottle by inverting the bottle of suspension over the funnel. After re-shaking the suspension about one-third of the mixture was returned to the 8 fl. oz. bottle, using the same funnel and with a brief intermediate shake to keep the bicarbonate dispersed. This first portion is identified as "portion A" in Table 3. A second portion was transferred to a 4 fl. oz. bottle in the same way and identified as "portion B." The remainder was left in the 10 fl. oz. bottle as "portion C."

To determine the strength of each portion, the bottle was shaken vigorously and about a quarter of the suspension rejected; then samples were taken as before for assay, but in this series about 20 g. was taken for each determination. The mean result of two assays is shown in Table 3.

TABLE 3
Strengths as Per Cent. W/W in Separate Portions of Sodium Bicarbonate Suspensions

Code No. of Mixture	Portion A	Portion B	Portion C
13	12.1	12.3	12.5
14	13.6	13.1	12.8
15	12.7	12.9	12.8
16	12.8	12.4	12.3
17	12.2	12.4	12.0
18	12.7	12.6	12.5
19	12.8	13.2	12.8
20	12.9	12.4	12.3
21	12.9	12.3	12.0
22	13.0	12.5	12.4
23	12.5	13.1	13.4
24	13.3	13.1	12.3

Method 3: A further twelve mixtures were divided into three portions as described under Method 2.

To determine the strength of each portion the suspension was transferred as completely as possible (but without dilution) to a flask and boiled gently under a reflux condenser for a few minutes to convert the bicarbonate to the more soluble carbonate. The contents were cooled and returned to the bottle as completely as possible (but without dilution), pouring part through the condenser. The trace of bicarbonate which had been left in the bottle was dissolved by shaking the container, and then 20 ml. lots were pipetted for assay by titration with standard acid as before. The results are shown in Table 4.

TABLE 4
Strengths as Per Cent. W/W in Separate Portions of Sodium Bicarbonate Suspensions

Code No. of Mixture	Portion A	Portion B	Portion C
25	13.2	13.2	13.1
26	13.7	13.7	13.4
27	14.3	14.3	14.4
28	13.5	13.2	13.6
29	13.7	13.8	13.6
30	13.9	13.8	13.8
31	14.0	14.0	13.7
32	13.7	13.6	13.4
33	14.0	14.0	13.8
34	13.8	13.9	13.6
35	14.8	14.7	14.5
36	14.6	14.6	14.4

Discussion: A convenient measure of the variations of strength between portions from the one mixture is the range over which the three results are spread.

The ranges for the data in Table 2 have a mean value of 0.5 and variance of 0.07; corresponding values for the data in Table 3 are 0.5, and 0.08. When the t-test is applied to these statistics, the difference between the means is found to be not significant. Thus the modifications introduced in method 2, which were expected to increase the accuracy with which the original sus-

pension was divided and also to increase the accuracy of the assay procedure, have not made any significant change in the variations of strength between portions.

The mean value of the ranges from the values in Table 4 (method 3) is 0.2, and the variance 0.008. This is significantly lower (at $P = .99$) than either the corresponding mean from method 2 or the pooled mean from methods 1 and 2. The method of dividing the samples is not changed in method 3, and the significant improvement results from the changed assay procedure. The methods of dividing the samples in all our procedures are simple, but the results are strikingly different from those recorded by Smith. It seems reasonable to suggest that the major part of these differences is due to the assay techniques used after the mixture has been divided.

Although method 3 is suitable for the assay of sodium bicarbonate suspensions (particularly if the divided portions have been stored for some time with increase in particle size and, perhaps, formation of flakes), it cannot be applied to the assay of other pharmaceutical suspensions.

The increase in the size of the insoluble particles on standing does not complicate the division of a suspension into three portions because this is always done soon after preparation of the mixture, and before any increase in particle size can occur.

The difficulties of accurately dividing sodium bicarbonate suspensions intended to be assayed under some testing programme must still be stressed, but it is even more important to stress that sodium bicarbonate should not be prescribed or dispensed in strengths above its solubility—even dosage would seem to be almost impossible.

Other less soluble substances will continue to be required as suspensions, and the problems of division into portions of identical strength and then accurate determination of strength will continue to exist. For most substances, however, the problems are less acute; even dosage demands the use of viscosity-increasing agents with those solids which settle quickly. If procedures similar to those outlined in methods 1 and 2 do not prove satisfactory, it is probably reasonable to conclude that the mixture was not correctly formulated.

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THE DESIGN AND ANALYSIS OF PHARMACEUTICAL EXPERIMENTS

By E. C. Mason
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Victoria.

(Paper presented May, 1961, at the 35th Congress of the Australian and New Zealand Association for the Advancement of Science.)

In the field of pharmaceutical experimentation during the last twenty years there has been world-wide emphasis on the investigation of methods for increasing the fermentation yields of a wide range of antibiotics. The fruitfulness of this work is evident in the tremendous mushrooming growth of the antibiotics industry, features of which are the growing number of products and their high potencies and ever-decreasing costs.

The present contribution is a relevant study of the efficiencies of two factors in promoting increased yields of Penicillin V (phenoxyethyl penicillin).

The factors were:

A — cystine, as a penicillin biosynthesis-stimulating sulphur component of the fermentation medium.

B — as alternative strain (Y) of *Penicillium chrysogenum*.

They were examined for their effects when applied as variants to a system normally comprising a basal medium and *P. chrysogenum* X in shake flasks. The experiment was designed as a 2×2 Factorial and involved the following basic reasoning processes.

1. Clear Statement of the Objectives

The aim is to determine whether A or B, or both, when added to the basal medium will cause an increase in yield of penicillin. It is reasonable to expect that, if there is, in fact, a true difference in effect in one or all cases, then the experiment should be capable of demonstrating such differences. In other words, the experiment should prove or disprove the hypothesis that "A and B each produce increased yield of penicillin V," and should give a quantitative measure of any effect that has been demonstrated. However, because of the inherent variability of response of a biological experimental unit, it seems unreasonable to expect that the true difference will be determined as an exact value. Alternatively, for a selected probability, say 0.95 (chosen by the experimenter), two limits can be determined such that there is a probability of 0.95 that the true value lies between them. These limits are known in Statistical Theory as 95% Confidence Limits.

A statistician, however, would not be satisfied with the hypothesis as stated above because it is too vague, or in other words is inexact. He requires an exact hypothesis because this is the foundation upon which he builds up, by valid arguments, the Analysis of Variance whereby the experimental results are processed to yield logical conclusions. Such a hypothesis, called a Null Hypothesis, is provided by the statement "Neither factor produces increased yield of penicillin." As Fisher¹ has stated, the experiment, whilst incapable of proving this hypothesis, may nevertheless disprove it if it is untrue.

Statistical tests of significance (e.g. F-test, t-test) provide a valid means for deciding from the experimental data whether to accept or reject the null hypothesis. In formulating such a test the statistician and experimenter require that true hypotheses shall be rejected only very occasionally, and the probability of rejection is selected by them. Probabilities of 0.05 and 0.01 are the most commonly used levels, and in these cases the tests of significance are said to be at the 5% and 1% significance levels respectively. At this stage, too, the experimenter must have a clear appreciation of the area over which he may apply his findings; it is advisable here to restrict application to shake flasks only, but the knowledge gained may be useful when planning a similar experiment for pilot tanks.

2. Description of Experiment

The experimenter now proceeds with the detailed planning of the experiment. Thus, the manner in which each factor is to be tested must be formulated; such formulations are referred to as treatments. The null hypothesis implies a comparison of each treatment with each other, and also with the basal system, which does not contain A or B. To these three treatments the experimenter may deem it useful to add a fourth, which contains both A and B at the levels used in their respective single factor treatments.

In this way, the statistician will be enabled to ascertain whether presence of one factor at different levels has any influence on effectiveness of the other. The four treatments may be designated—1, a, b, ab—where

- 1 = the basal medium seeded with *P. chrysogenum* strain X
- a = the basal medium plus a% of Factor A (cystine)
- b = the basal medium seeded with *P. chrysogenum* strain Y
- ab = the basal medium plus a% of Factor A and seeded with *P. chrysogenum* strain Y.

This experimental design is an example of a 2×2 Factorial, a very economical approach where the factors are independent, because each is estimated with the same degree of precision as if the experiment were concerned only with that factor. The experimenter must also choose the type of evaluation measurement to be

made; the choice here was in favour of using a biological assay.

It is at this stage also that the experimenter must carefully consider the physical conduct of the experiment; thus the amount of cystine (here 0.3%) must be weighed to within say $\pm 1\%$ of the calculated weight, whilst care must be taken to ensure that *P. chrysogenum* inocula are of constant dosage throughout. Care must be taken, too, to provide sufficient resources in labour, materials, and time, to ensure that all replicates of all treatments shall complete the planned fermentation period.

The statistician must advise (and, preferably, supervise) the experimenter on the very important aspect of randomisation as applied to the handling of the experimental material and the application of the treatments. Randomisation is a fundamental requirement because its conscientious application goes far to ensure that the experimenter is indeed testing only the effects of the factors specified. In general, an experiment is arranged so that known sources of extraneous error are eliminated, and randomisation is used to minimise the effects of unknown sources of extraneous error. The subject of error is a very important one, and it is desirable that the experimenter should have a fuller understanding both of the origin and of methods adopted for its elimination.

3. Error

In the field of experimentation it is commonly asserted that any set of results is associated with a certain "experimental error." In the planning of the penicillin shake-flask experiment it is obvious that great care has been taken to avoid mistakes. How, then, do errors arise?

They usually arise in two ways:

- (i) As a result of inherent variability in the experimental material (or units) to which the treatments are applied. Here, the shake-flasks may be of non-uniform dimensions, so that there could be corresponding variations in liquid surface area, and liquid depth, in proceeding from one flask to another. Obviously, the experimenter must not arrange flasks into sets on the basis of liquid depth and surface area, and then apply each treatment, respectively, to a selected set. This would constitute conscious bias, and would mean that the experiment was a comparison, not of the actual treatments, but of treatments loaded with different degrees of extraneous error.
- (ii) Departures from uniformity in the application of standardised experimental procedures. In the shake-flask experiment, despite the exercise of reasonable care, it is quite possible that there could be small variations in volumes of penicillin medium dispensed into the flasks. The error can, of course, be reduced to extremely small levels by allotting more time and labour to the task. However, the greater expense involved is often not justified because randomisation goes far to minimise this error.

Errors of these two types affect the results of all experiments, and in extreme cases may be so large that detection of small treatment differences is impossible.

To minimise the effect of error, various devices are used; these are:

- (i) Increase the size of the experiment.
- (ii) Refine the experimental technique.
- (iii) Handle the experimental material in a manner designed to reduce the effects of variability, e.g. randomisation as already discussed, and skilful grouping such that units to which one treatment is applied are closely comparable with those to which another treatment is applied.

In discussion of these three points, the size of the experiment must be large enough to give a satisfactory degree of precision without being so large that cost and convenience of performance are disproportional to the

importance of the experiment. The statistician and the experimenter should have some idea of the desirable level of each factor such that, where a true effect exists, then there is a reasonable probability of producing a significant response. This approach has been thoroughly treated in Cochrane and Cox².

Refinements of technique are, of course, the direct responsibility of the experimenter, but the statistician may be well placed to offer constructive criticism. Extraneous sources of error must be minimised in order to ensure that each treatment produces its effects under comparable, specified conditions. In this experiment, the shake-flasks must be located in an area where the air temperature is uniform throughout, for it would add to the experimental error if some flasks were incubated at 25°C whilst the remainder were incubated at 24°C.

The experimenter must ensure, by constant supervision, that there are no gross errors during the experiment—e.g. gross errors would surely result if some or all of the flasks were accidentally stationary for a certain period during the run.

The choice of experimental material must be directed towards usage of homogeneous units, but the selection should not be too specialised if the results are to be applied or generalised to a very large population consisting of a wide variety of these units.

Errors may be minimised also by selection of the best applicable experimental design. Thus, a choice may be made from the following well-tried types of design—

- (a) Completely randomised design or one-way classification.
- (b) Randomised block design or two-way classification.
- (c) Extensions of (b)—Latin square, Graeco-Latin square.
- (d) Various special designs for more specialised experiments, e.g., incomplete blocks, split-plot, strip-plot, lattice designs, etc.

In general, one selects the simplest design that adequately meets the requirements. If prior experimental evidence is available, the statistician may even proceed to evaluate different plans to assist his choice. It would appear satisfactory here to use a "randomised block" design. Thus, each treatment could be replicated, say, three times, by arrangement of the treatments in three blocks each containing a representative of each treatment. Actually, in this experiment, all three blocks were on the one shake-table, but they could have constituted three separate shake-tables.

The particular advantage of this design compared with a Completely Randomised Design (one where treatments are allocated to units in a completely random manner) is that environmental effects are minimised, i.e., there is less chance that differences between treatments are obscured by superimposed environmental effects. If the experiment were designed as a C.R. Design and the three shake-tables were actually shaking at slightly different speeds, to give three separate and different environmental effects, it could by chance happen that there was a preponderance of Treatment 1 flasks on the first table, a preponderance of Treatment b on the second table, and so on, so that the real treatment differences could be loaded with differences between the tables.

With Randomised Blocks, where each block contains, say, one replicate of each treatment, comparisons can be made between treatments on Block 1, similarly on Block 2, and so on, and these comparisons can be pooled to give an overall comparison that is completely independent of differences between blocks. Positioning of treatments on each block is, of course, carried out in a random manner.

4. Analysis of Results

Having thus arrived at a satisfactory experimental plan, the statistician proceeds to a complete outline of his proposed method for examination of the experimental results, which usually involves,

TABLE I
Maximum Yields of Penicillin V in Shake-flasks
Incubated at 25°C

Treatment	Yields in Blocks (mcg./ml.)			Totals
	1	2	3	
1	1210	1190	1290	3690
a	1370	1380	1480	4230
b	980	1000	1100	3080
ab	1560	1640	1550	4750
Totals	5120	5210	5420	15750

- (i) A table for the presentation of results (see Table 1).
- (ii) An Analysis of Variance of the data (see Table 2).
- (iii) A statement of the treatment differences that are to be estimated and significance tests to be applied (see Table 3).

This outline must be examined critically by both the experimenter and the statistician, and should be compared with the outline of the experiment to verify that the treatment comparisons are relevant to the stated objectives. When both participants are satisfied on these points, the experimenter is free to carry out the experiment.

5. Results

From the results presented in Tables 1 and 2 it is clear that highly significant effects were produced by cystine, and the combination of cystine with Strain Y, respectively; on the other hand, the replacement of Strain X with Strain Y, in the basal medium, had no significant effect on penicillin yield.

In Table 3, the 95% Confidence Limits for "adjusted

TABLE 2
Analysis of Variance of Data in Table I

Source	d.f.	S.S.	M.S.	V.T.
Main Effect of A	1	407,008.33	407,008.33	171**
Main Effect of B	1	675	675	0.3
Interaction AB	1	106,408.33	106,408.33	45**
Between Treatments	3	514,091.66	171,363.89	72**
Between Blocks	2	11,850	5,925	2.5
Error	6	14,283.34	2,380.56	-
Total	11	540,225		

* F - test significant at the 5% level

** F - test significant at the 1% level

TABLE 3
Summary of Adjusted Treatment Means

Treatment	Adjusted Treatment Mean	Standard Error of Adjusted Treatment Mean	95% Confidence Limits for A.T.M.
1	1222.5	28.17	1153.5 - 1291.5
a	1402.5	28.17	1333.5 - 1471.5
b	1034.2	28.17	965.2 - 1103.2
ab	1590.8	28.17	1521.8 - 1659.8

treatment means" illustrate the situation in more quantitative manner.

6. Conclusion

The statistical approach to the design and analysis of this experiment, plus careful attention to detail during its execution, have strengthened the experimenter's confidence that valid inferences may result.

The actual findings are:

- (1) Cystine added to the basal medium promotes a significant increase in penicillin yield.
- (2) *P. chrysogenum* Strain Y used as inoculum in a basal medium to which cystine has been added produces significantly higher penicillin yield than does *P. chrysogenum* Strain X.
- (3) When used as inoculum in basal medium, *P. chrysogenum* Strain Y produces penicillin yields significantly lower than those obtained with Strain X.

References

1. Fisher, R.A., "The Design of Experiments," Oliver and Boyd, Edinburgh and London, 1935.
2. Cochrane, W.G., and Cox, G.M., "Experimental Designs," John Wiley and Sons, Inc., New York, 1950.

PROBLEMS IN CONDUCTING CLINICAL TRIALS

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(A paper presented at the Brisbane Meeting
A.N.Z.A.A.S., May, 1961.)

At some stage in the development of a new drug for treatment of a disease, observations will have to be made on human beings. A great deal of preliminary work will have been done already by the laboratory worker and pharmacologist to characterise its physiological activity, to assay its potency, and to determine its toxicity for laboratory animals. Nevertheless, what has been proved for one species may not hold for another, and in the long run only trials in patients can give the answer as to the drug's effectiveness and freedom from undesirable or even dangerous side effects.

Clinicians have learned much and will continue to learn by observing the effects of new drugs on patients and comparing them with past experience. Most of the progress of medicine has come about in this way. If the effect of a drug is striking, no great difficulty is encountered in establishing its effectiveness by this observational method. When, as is much more often

the case, the drug confers only small benefits or none at all, the same uncontrolled observational method may well give rise to a misleading report. This could result in a valueless treatment being widely used before falling into disrepute. A planned trial by which one treatment is compared with another (or placebo) in tests on an adequate number of suitable patients would prevent this happening and would efficiently sort out the effective from the valueless or harmful drugs.

Of course there are circumstances in which controlled trials cannot be performed for ethical reasons, and in these cases one must fall back on the observational approach.

In discussing this point, Bradford Hill (1958a) referred to retrosternal fibroplasia. An early experiment to determine the advantages and safety of oxygen treatment for premature babies would have been resisted because the practice was regarded as life-saving. After the observation that oxygen treatment was the likely cause of blindness in babies so treated a controlled trial would have been resisted even more strongly for very different reasons.

The public and the press sometimes raise strong but unfounded objections to planned clinical trials because they give us credit for knowledge we do not have. Perhaps we and they are now beginning to realise how ignorant we are, for many of the former objections are disappearing in the face of an enlightened outlook fostered by Bradford Hill, Mainland and others. They emphasise that the long-accepted observational testing is in fact merely inefficient experimentation.

Further, it is frequently possible to arrange a controlled trial which is far more ethical than the uncontrolled experimentation with unproven products to which unsuspecting patients are sometimes exposed.

The ethical problem is one which cannot be neglected; it arises in various forms and degrees in all clinical trials. Each investigation should be judged on its own merits—strict generalisation is impossible. Ethical aspects, to be considered when contemplating clinical experiments, are listed in Table 1.

Now let us consider how we should go about planning a clinical trial.

TABLE I.
GUIDE TO THE ETHICS IN CLINICAL TRIALS

1. THERE IS A REASONABLE PROSPECT THAT THE DRUG OR TREATMENT TO BE TESTED IS OF VALUE.
2. IT'S EFFICACY HAS NOT BEEN ADEQUATELY PROVED.
3. IT IS NOT LIKELY TO HAVE UNDESIRABLE SIDE EFFECTS.
4. NO HARSHNESS OR UNNECESSARY RISK OR SUFFERING IS LIKELY.
5. SOME BENEFIT TO SOCIETY SHOULD BE SOUGHT WHICH IS OTHERWISE UNATTAINABLE.
6. A NEW TREATMENT SHOULD BE COMPARED WITH THE BEST PREVIOUSLY AVAILABLE TREATMENT.
7. CONSENT OF SUBJECT IS USUALLY ESSENTIAL AND ALSO CONSENT OF THOSE ATTENDING THE PATIENT.
8. A CORRECT DOCTOR-PATIENT RELATIONSHIP WITH NO SUGGESTION OF DECEIT SHOULD BE PRESERVED.
9. THE PATIENT MAY BE REMOVED FROM THE TRIAL AT ANY TIME AT HIS OWN OR THE DOCTOR'S REQUEST.
10. IN DOUBLE-BLIND TRIALS A SEALED CODE SHOULD BE AVAILABLE TO THE DOCTOR ATTENDING PATIENT FOR EMERGENCY USE.

CASE REPORT FORM

Name (or case no.)

DX

Duration P. I. Acute Chronic

Male

Female

Age

Severity of Pain
Prior to Beginning
TherapyMild
Moderate
SevereCode

Date	Daily Observation			DAY MEAN	Side Effects						REMARKS
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ease of abstracting are essential for this type of trial. A Canadian example is shown as Figure 1 (Cass and Frederik, 1960). The numbers in columns 2, 3 and 4 are gradings of the relief of pain. The test was well planned on a double-blind basis and was successfully completed. Statistical analysis was both straightforward and informative.

The importance of the placebo in this type of trial is well illustrated in a test on the value of an antihistaminic drug in the treatment of the common cold (Knowelden, 1960). Figure 2 conveys a striking impression of the efficacy of the antihistamine. However, in Figure 3 the same results are compared with those

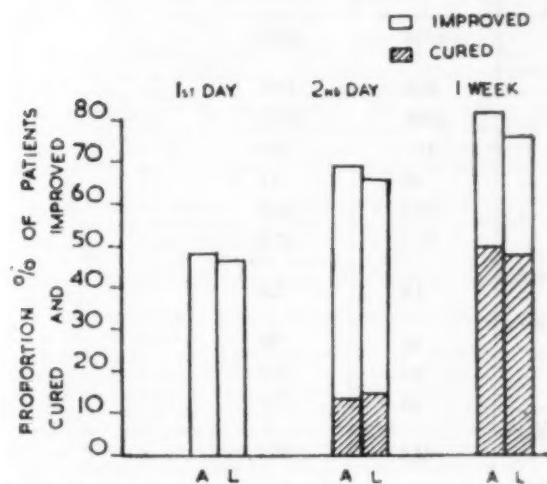


Fig. 3. Response of Colds to Antihistamines and Lactose.

of a placebo-treated group. The responses were almost identical, and a more sober conclusion that the drug was of no benefit is reached.

Although the statistical analyses were carried out at the conclusion of both of these subjective trials, they could have been planned sequentially. This was not done possibly because patients were readily available for both trials.

At our Laboratories in Melbourne a sequential trial was used for comparing pollen extracts treated in different ways (Trinca and Derrick, 1961). A sequential design was selected, firstly, because patients of the required skin sensitivity were scarce and, secondly,

because the results of skin tests are quickly available, a feature desirable but not necessary for the sequential method.

Graphs of results from some of these tests are shown on Figures 4, 5 and 6. Figure 4 shows a test in which a decision was reached after 23 comparisons, the sequential graph crossing into the area where A is better than B. No further tests were needed after the boundary had been crossed.

SKIN TESTS. POLLEN EXTRACTS.

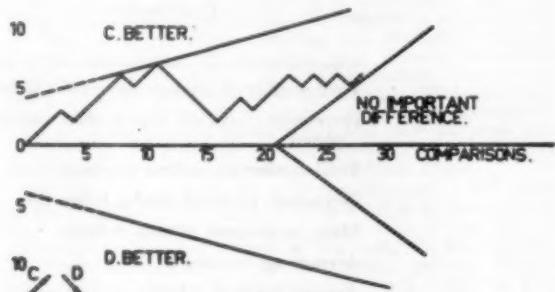


Fig. 5

In Figure 5, which compares two other preparations, the graph headed for the upper boundary, just reached it, and then veered back into the area of no decision where it remained. Tests are continuing.

The position is different in Figure 6, where the graph crossed into the area of no significant difference in only

SKIN TESTS. POLLEN EXTRACTS.

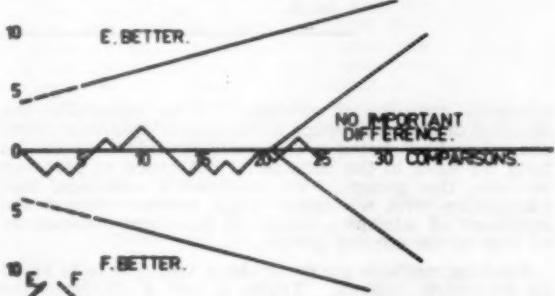


Fig. 6

22 tests. Further tests are not necessary, as it is unlikely that an important difference exists between these preparations.

Actually, measurements of the diameter of skin reactions were recorded in the above tests, and these may also be handled sequentially with a little more calculation and a possible increase in sensitivity.

Greater precision can often be achieved from the same number of patients if some form of stratification is adopted by which the effects of factors such as age, sex and severity of disease are balanced between the groups. I have drawn on a table constructed by Bradford Hill (1958) from data published by the Medical Research Council's Whooping Cough Immunisation Committee to illustrate this feature (Table 2). In this large scale trial, children were divided by sex and age into eight groups, and within each group the whooping-cough and anti-catarrhal vaccines being compared were

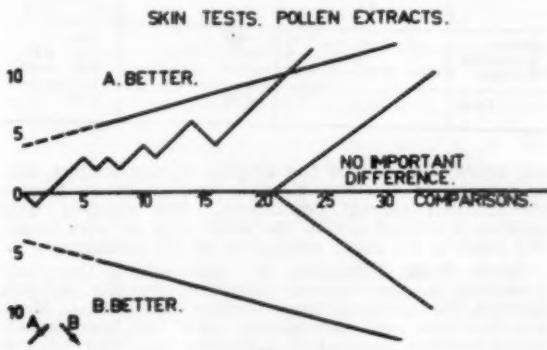


Fig. 4

TABLE 2

OBSERVATIONS OF THE PARTICIPANTS IN A TRIAL OF VACCINATION
AGAINST WHOOPING-COUGH.

*(Constructed from data published by the Medical Research Council's
Whooping-Cough Immunization Committee)*

Characteristic	Vaccinated with Whooping- cough vaccine	Vaccinated with anti- catarrhal vaccine
Total number of children entered for inoculation ...	4,515	4,412
Percentage excluded before three injections completed ...	15.8	14.8
Total number given three injections ...	3,801	3,757
Percentage excluded during follow-up ...	11.7	10.8
Males as per cent of total children ...	48	51
Average age in months ...	12.2	12.2
Average duration of follow-up in months ...	27.1	27.2
Average number of children under 14 years of age per household ...	1.8	1.8
Percentage of inoculated children reported to have been breast fed ...	80	80
Average duration of breast feeding in months ...	5.3	5.4
Percentage vaccinated against smallpox ...	63	62
Percentage attacked during follow-up by measles, chicken pox or broncho-pneumonia ...	34.3	33.7
Percentage attacked during follow-up by whooping-cough ...	3.9	18.3

allocated entirely at random. Note especially the quality of the two groups in the other "epidemiological characteristics" listed. This adds considerably to the faith we have in the substantial difference in pertussis between the groups. We confidently conclude that vaccination with whooping cough vaccine reduced the incidence of whooping cough to less than one-quarter that in the control group.

Ranking methods are particularly useful in tests based on subjective criteria. Tables 3 and 4 illustrate the design and statistical analysis of ranked comparisons of four treatments (Cochran, 1960). Boys were asked to taste and record their preferences for four flavourings of chocolate. Their rankings are summarised in Table 3. Analysis of variance showed that some differences between flavours were significant, and appropriate

statistics showed that flavour A was superior to the others which did not differ significantly from each other.

Some theoretical advantages are claimed to follow the use of rankits in place of ranks for statistical analysis. Both are given in Tables 4 and 5. Rankits

Table 4

Analysis of variance of ranks and rankits

	d.f.	Ranks S.S. m.s.	Rankits S.S. m.s.
Blocks	$m - 1 = 31$	0.00	0.00
Treatments	$n - 1 = 3$	30.06	13.36 4.45
Residual	$(m - 1)(n - 1) = 93$	129.94	60.30 0.648
Total	$mn - 1 = 127$	160.00	73.66

are average values of the largest, second largest, etc., in samples of test size (in this case 4) drawn from a standardised normal population. The analysis with rankits is carried out in the same way as with ranks, and leads to the same conclusion in this example.

Apart from difficulties in organisation, the main problems in experiments involving human subjects concern the numerous factors which lead to bias. Much conscientious and painstaking work has been invalidated because insufficient attention has been paid to these factors.

Table 3.

Ranking of 4 chocolate flavours by 32 boys.

Flavour	No. of boys giving rank 4	3	2	1	Sum of ranks	Sum of rankits
A	18	9	0	5	104	16.09
B	4	6	8	14	64	-10.90
C	3	4	20	5	69	-6.86
D	7	13	4	8	83	1.67
Totals	32	32	32	32	320-G	0.00
Rankits	1.03	0.30	-0.30	-1.03		

Some of the more important ways of overcoming the problem of bias in trials of new drugs are as follows:-

1. Whenever possible, the trial should be conducted on a "double-blind" basis whereby neither the patient nor those attending him know to which treatment group he belongs. For this to be possible it is necessary for the control group to be given a medicament (placebo or other treatment) which is indistinguishable from the test drug. Both are labelled only by code letters and their identity kept secret until the trial and, preferably also, its statistical analysis, are complete.

2. When selecting patients for inclusion in the trial, the clinician should not know which treatment they are to receive. Likewise the observer who assesses the condition of patients after treatment should not know which treatment they have received.

3. Several random methods are available for allotting treatment to patients. One of the simplest and most effective is to give or attach to each patient a sealed envelope containing a code letter corresponding to the treatment he is to receive. When the test subjects are stratified in respect to some characteristic, particular care is necessary to ensure that the treatments are allotted at random to patients within each of the classifications. Pairing of patients graded as similar is often helpful but, again, allocation to treatments must be at random.

4. One should not use one doctor's patients as controls for another's or results in one hospital or district as controls for other hospitals or districts.

5. Retrospective controls and comparisons of results obtained at different time periods or seasons should be avoided.

6. Non-volunteers cannot safely be regarded as controls for volunteers.

Statisticians not appreciative of the practical and ethical difficulties of making tests on human subjects are often impatient because available efficient designs are not more widely used in medicine. It is, therefore, desirable that statisticians assisting in clinical trials should have a biological background and should be in close collaboration with the clinician at all stages of the trial.

I would end with a plea for greater co-operation between all parties. Bradford Hill (1960) says that, without pretending to expert knowledge, the clinician must think statistically and the statistician must think clinically. I would add that if the pharmaceutical industry, with the same proviso, learns to think both clinically and statistically, its search for new therapeutic drugs will be more fruitful.

Summary

The need for controlled clinical testing of new therapeutic drugs is emphasised. Various aspects in the planning of a controlled clinical trial are discussed together with ethical problems and ways of avoiding the bias which is peculiar to experiments in man. Examples illustrating features of some designs are given.

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COMMENTS ON GANGLIONIC AND ADRENERGIC BLOCKADE IN ESSENTIAL HYPERTENSION

By K. J. C. Johnson, Ph.C.

(A paper read at the Brisbane Meeting A.N.Z.A.A.S., May 1961.)

My opening remark should be open to the charge that it is so obvious as to be trite, but unfortunately experience persuades me that it can't be stated too often. It is this; the success attending a therapeutic use of a drug is directly related to the pharmacological properties of that drug and the pathological and physiological system into which it is introduced. Those few words sum up both the degree of possible benefit and, at the same time, the problems of drug therapy. The treatment of essential hypertension presents as nice an example of this problem as we could find, and my purpose this morning is to try to outline this relationship with regard to the ganglion and adrenergic blocking drugs.

Because I have little time at my disposal, I am going to assume that we all possess a reasonable understanding of haemo-dynamic physiology, and that I can launch straight into a quick review of the complex mechanisms operating in and upon the circulatory system. Mechanisms through which the organism as a whole is able to perform the varied and multifarious activities it is called upon to perform in response to demands made either by environmental circumstances or by its own whims and fancies. In this sense you will recognise that the animal body has a flexibility of energy output rather similar to that of an engine, in that it can just "tick over" or idle, sustain a constant level of activity within limits, and touch a maximum high level on demand, with a return to a lower level when the demand ceases. In all these requirements the circulation normally manages to play its all-important part and to function, may I emphasise, entirely outside conscious control.

What are the factors involved and the mechanisms which have been developed to allow this flexibility?

First we must note that the total blood volume is considerably less than the total and potential volume capacity of the vessels that contain it. We use our available blood volume much as a general uses his army, mobilising and deploying reserves as demands dictate, whilst maintaining the necessary front-line strength.

Also to be remembered is that the blood is circulating continuously; even the reserves are never stationary. The main vessels, of course, are always filled, though not all the time with the same volume and at the same pressure.

We must further note that the larger part of the vascular capacity resides in the peripheral or capillary beds. These beds serve as the depots for the reserve of blood upon which the bodily systems draw when raised activity creates a raised requirement of blood supply. The most important capillary bed in this respect is the abdominal or splanchnic bed.

As an example of how blood requirements can vary, it has been calculated that the vascular bed of a muscle in maximum activity may receive 750 or more times as much blood, in a unit of time, as the muscle bed at rest. The mention of a time unit serves to remind us that speed or velocity of circulation as well as volume available is a highly important factor. Velocity is a measure of cardiac output and the pressure behind and in front of it. Cardiac rate and output is therefore of great importance in the mobilising and transporting of blood, though it will not receive much direct attention in this talk.

Now let us look quickly at the mechanics underlying this management of mobilisation and transport of blood, but without direct reference to cardiac activity itself.

The basic force used is pressure, pressure of blood against the vessel walls serving to drive the blood onwards. This pressure is built up or relaxed by reducing or increasing the lumen of the vessels. The vessel walls contain circular bands of muscle which by constricting reduce the lumen or diameter; they may also possess elastic tissue which, when the muscle is relaxed, can stretch and so allow an increase in diameter. The presence of muscle fibres or elastic tissue in any part of the vascular wall depends on the physiological function of that part. Thus the main arterial trunks, which functionally need to be able to stretch rather than constrict, are rich in elastic tissue but poor in muscle fibre. The walls of the arterioles, on the other hand, are rich in muscle fibre and possess little elastic tissue, evidenced by the thin inner lining and outer coat.

Blood reaches the capillaries from the arterioles via still smaller vessels called meta-arterioles. The capillaries themselves run off these vessels to form clusters which together make up the so-called capillary beds. The meta-arteriole finally joins up with a small venule on the venous side of the circulation. Its walls proximal to the arteriole contain muscle fibres but no elastic tissue, and the capillary itself also possesses some muscle fibres immediately proximal to the meta-arteriole. Finally, there is a connecting vessel from the meta-arteriole direct to a venule close to the arteriolar end, so that this particular capillary cluster can be short circuited.

When the organism is at rest, these capillary beds, particularly the splanchnic, hold a considerable proportion of the blood volume. If activity is demanded of certain muscles, then these muscles will require an ample blood supply, and this extra blood will be drawn from the capillary reserves.

Arteriolar and meta-arteriolar muscles will constrict, and this action promptly shuts off the blood supply to the capillary bed. It also serves to help drive the blood in the capillaries back into the main circulation, and so the necessary requirements of the active muscles are made available.

In direct contrast to this, the vascular channels of the muscles are relaxed and opened up for the reception of the extra blood now pumped to them. Other mechanisms will cause a speeding up of the heart rate and an increase in its contractile force, so that cardiac output can also meet requirements. The brain and other bodily systems still maintain their needs, of course, but the extra blood available should be adequate for the total demand. If the mobilisation mechanism breaks down, then the active muscle will attempt to derive its needs from the circulating supply, with the result that the pressure in the main vessels will fall and a blood starvation of the other systems result.

When activity ceases the dilated muscle vessels will constrict again and the constricted splanchnic vessels relax, so allowing a restoration of the status quo.

Now we must consider what is, from our point of view, the most important part of the whole story. The extraordinarily complex and sensitive mechanisms which automatically control this mobilisation, transportation and overall management of the cardio-vascular system. Mechanisms which bring about a rise or a reduction in blood pressure as occasion demands, either in a corrective sense or an active sense, as it were, and mechanisms which control cardiac activity and respiration in the interests of the circulatory requirements. I have not the time or the knowledge to attempt any detailed discussion of this control system, but I would stress with all the emphasis I can its amazing sensitivity, the inter-relationships, and the variety of mechanisms both neural and humoral which react upon and balance each other so effectively in achieving this objective.

It is a fundamental characteristic of any living organism that its "internal economy," or total activity, will seek to operate at a basic equilibrium, a state generally referred to by the term "homeostasis." On the other hand, it is equally fundamental that the organism's external environment will not allow a static equilibrium

to be maintained, so that elasticity is essential to life in its variable environment.

The motor car engine returns to its set idling speed when the accelerator is released; in a similar way the organism returns automatically to its basic equilibrium as soon as circumstances permit. There is a physiological aim to restore this equilibrium, and our cardio-vascular control is intimately associated with this aim just as much as it is with adaptation to extra demands.

The last point I would make is that in essential hypertension, and for reasons we at present don't understand, the basic equilibrium as far as blood pressure is concerned has been set at a high level. Essential hypertension is not simply the result of some environmental or emotional but temporary stress; it is a basal hypertension, and the control mechanisms will endeavour to maintain it against forces seeking to alter it. When we attempt to control essential hypertension, this is the physiological fact that must not be overlooked.

With a minimum of detail I might now briefly summarise these mechanisms controlling circulation, cardiac and, of course, respiratory activity. It will, I hope, serve to emphasise their number and variety.

1. There are the vasomotor centres in the brain itself, two of which, a vasoconstrictor and a vasodilator, have been anatomically located in the medulla; there is quite an element of doubt as to whether the vasodilator centre is actually a separate entity, but we will not concern ourselves with that. A third and higher centre has been postulated in the hypothalamus, and there is also the question of control from the cortex.

Associated with the medullary centres are cardiac and respiratory control centres.

2. Outside the main brain stem are the reflex centres, the carotid sinus and carotid body, the aortic sinus and aortic body. These centres are extremely sensitive to pressure changes in the vessels or to chemical changes such as CO_2 or O_2 concentration, H^+ ion changes, and so on; they react to the presence of certain drugs.

These centres are afferent in nature and not efferent. In other words, they transmit information to the vasomotor centres, which react accordingly; they do not directly initiate any change in pressure, heart rate or respiration.

3. The autonomic nervous system through which the vasomotor controls operate. In the case of blood pressure control it is the adrenergic division of the autonomic which plays the important role. The mechanics of vasodilatation are as yet imperfectly understood, for there are only a few specialised dilator fibres in certain blood vessels; there is no widespread parasympathetic innervation of the vascular system. Probably the well-known dilator property of the adrenergic nerves plays some role.
4. Hormonal secretions affect blood pressure either directly or indirectly. Adrenaline from the adrenal medulla and circulating in the blood stream is really a hormone, and of course directly brings about constriction or dilatation of the blood vessels. Thyroid hormone definitely sensitises the vessel muscle to constrictive forces. The sex hormones are not without influence. The adrenal cortex hormones, the pituitary pressor hormone, the pituitary antidiuretic hormone, all these play important roles.
5. There are the little understood humoral substances; 5-hydroxy-tryptamine, histamine, hypertensin, kallidin, and probably others, all of which seemingly operate on the vessel walls direct either to dilate or constrict.

Before moving on to the ganglion blocking and adrenergic blocking drugs, may I just enumerate three important physiological principles with which these drugs will be involved when they are given to patients suffering from essential hypertension.

- (1) The overall homeostasis of the organism.

- (2) The circulatory homeostasis which has been set "high" in these patients.
- (3) The variety of mechanisms which by reacting upon, reacting to and balancing each other control this homeostatic level or elasticity.

If you did not before, you will now, I hope, appreciate that to attempt the control of essential hypertension with drugs is a therapeutic exercise of magnitude and complexity, with each patient a new and separate problem.

Even though success has been limited, the most productive approach to this therapeutic problem has so far been through modification of adrenergic activity at one level or another. We are concerned with modification either at the ganglionic level or somewhere along the post-ganglionic fibre. As you will know, adrenergic impulses are transmitted to the muscle fibres themselves with the aid of noradrenaline. At the same time these muscle fibres will also respond direct to circulating adrenaline and other substances. Adrenergic transmission across the ganglion synapse is brought about through the agency of acetylcholine, and the same chemical is responsible for ganglionic transmission of cholinergic or parasympathetic impulses. For many years we have possessed drugs which antagonise adrenaline and noradrenaline, the so-called adrenolytic drugs, of which examples are the ergot alkaloids, dibenamine and dibenzylene. In the treatment of essential hypertension these drugs have proved unsatisfactory, being too drastic in effect and too difficult to control.

The discovery of a substance which blocked ganglion transmission therefore evoked interest. About 1946 the first ganglion blocking drug to effectively reduce high blood pressure was demonstrated. This was hexamethonium, and it has, of course, since been replaced by improved blocking agents, those in widest current use being mepacrylamine and pempidine. These drugs appear to act by interference with transmission across the ganglion synapse, and this action occurs in all autonomic ganglia. They do not interfere with the action of noradrenaline or adrenaline. Because ganglion blocking drugs block transmission in both adrenergic and cholinergic ganglia, their practical limitations will immediately become obvious. Unless a relatively mild degree of adrenergic block will provide an effective result for a given patient, then cholinergic blockade is bound to prove troublesome and perhaps disabling, for this type of blockade will develop roughly in parallel with the adrenergic blockade. Bear in mind that we can continue to live even with complete adrenergic block, but we cannot long survive a cholinergic block. These cholinergic side effects have indeed proved the biggest drawback to treatment with ganglion blockers, and once again the cry went up for some substance which would provide a selective blockade. Remember also that this cholinergic blockade dominated the picture and overshadowed any potential problems of pure adrenergic blockade. Be that as it may, some two years ago the discovery was announced of two drugs which both selectively blocked adrenergic transmission without significant interference with either cholinergic transmission or with circulating adrenaline. They were not ganglion

blockers nor were they adrenolytic drugs. I refer to bretylium and guanethidine.

The immediate reaction to these pharmacological successes was one of optimistic expectation that the ideal drug for treating essential hypertension was in sight. Excessive sympathetic tone would be reduced without interference to any other system. Early trials were encouraging, but it must be appreciated that initial clinical trials of this nature are done under conditions of close and expert control which do not reflect the normal circumstances in which the drugs will be used. With wider use problems began to be evident. These were not so much problems of side effects, for the side effects, though they occurred, were not so generally serious and disabling as those accompanying ganglion blockade. Neither did serious toxicity create difficulties. The problems relevant to adrenergic blockade stem in a most particular way from the physiological complexity of the control mechanisms which I have been at such pains to emphasise.

You see when we modify sympathetic innervation we modify its total role as a compensating factor in haemodynamic balance. We not only relax the constricted vessels; we may well prevent physiologically necessary constriction when circumstances change and we interfere with the physiological inter-relationship of the sympathetic system with other factors in vasomotor control. If such interference is not to be of drastic significance to the overall functional ability of the patient, then the physician must assess these factors with the nicest judgment.

You might well ask the question at this stage, since ganglion blocking drugs similarly inhibit sympathetic nerves, do they not pose similar difficulties in therapy? They do in effect quite frequently produce problems of this nature but, more often, before the intensity of their sympathetic blockade has become great enough to do this, they have already produced disabling side effects by their parasympathetic blockade. The full picture is not yet really clear, for it may also be that by inhibiting both divisions of the autonomic system this dual effect in itself reduces some of the potential imbalance. Furthermore, we must remember that a ganglion blocking drug prevents adrenal medullary activity and so reduces the amount of circulating adrenaline. This is particularly significant in that the denervated muscle is more than usually sensitive to circulating adrenaline. This increased sensitivity is probably associated with the homeostatic principle that the basic blood pressure level must be restored if not by one means then by another. As I have already stressed, in essential hypertension this level is high, it has been maintained high by excessive sympathetic tone; when that is removed then the physiological aim will be to restore it with any other effective mechanism possible.

My time, I am afraid, is used up, but I hope I have succeeded in throwing a little light for you on the reasons why these therapeutic problems arise. There is no time to discuss how they might be minimised, if not circumvented, but I hope that some lines of approach will suggest themselves to you.

ORAL POLIOMYELITIS VACCINE

(Reprinted from The Chemist and Druggist, April 22, 1961.)

An attenuated poliomyelitis virus was first given to man for the purposes of immunisation in 1950. Since then oral poliomyelitis vaccine has come to be widely used; by 1960, for example, it was estimated that throughout the world about 70 million doses of vaccine had been administered. In Britain the use of oral vaccine has been limited to clinical trials, but recently attention has been directed to the oral method by the

report that the Ministry of Health may sanction the adoption of its use in epidemic conditions.

Oral poliomyelitis vaccine consists of attenuated living poliomyelitis virus. Three distinct strains of attenuated poliomyelitis virus have been employed in the preparation of vaccine. The Koprowski strains which were used in the Belgian Congo and in Poland; the Cox strains in large-scale field trials in Florida and West Berlin, and the Sabin strains. Laboratory tests in the monkey suggest that the latter strains are the most suitable for widespread vaccination. Sabin strains were chosen by the Public Health Authorities for the production of vaccine in the United States, and it is vaccine prepared from those strains which is available in

Britain. Three types (1, 2 and 3) of attenuated virus are included in the vaccine.

In discussing the indications for oral vaccination it has to be borne in mind that the killed Salk vaccine in current use has proved to be very effective. Protection after adequate Salk vaccination probably exceeds 90 per cent. and may be more than 95 per cent. following four doses. However, despite its general efficacy, Salk vaccine has imperfections. Failures after vaccination are not unknown, more particularly with the type 3 component. Moreover, adequate vaccination requires three inoculations and more may be needed to produce long-lasting immunity. This naturally reduces the proportion of the community who become effectively protected. A further disadvantage is the presence of small amounts of extraneous protein and antibiotics which may occasionally give rise to reactions. Vaccination of infants under six months—desirable when poliomyelitis vaccine is given in conjunction with other immunising agents—is unsatisfactory with the Salk vaccine in general use today. However, despite those disadvantages, there is no doubt that Salk vaccination is a safe and effective method of preventing poliomyelitis. Clearly the oral method requires to possess substantial advantages if its introduction is to be seriously considered.

With regard to the general protective effects of the oral vaccine, evidence of efficacy has come from two sources; a number of detailed studies of the capacity of the vaccine to produce antibody, and large-scale investigations in which the incidence of poliomyelitis in vaccinated and control groups has been compared. All reports indicate that oral vaccination gives adequate protection. Especially noteworthy are the studies in Russia where in 1959 some 1,700,000 children were vaccinated. In regions where the vaccine was widely used the usual seasonal rise in the incidence of poliomyelitis failed to take place, while poliomyelitis occurred with its anticipated frequency in control regions where the vaccine was not used.

Oral vaccination is unique in that the virus multiplies in the gut of susceptible persons and spreads among the community to those not previously vaccinated. Spread of the virus is most likely in the summer, in conditions of poor hygiene and in young children; in communities with good social conditions, in adults and during winter spread is less common. Spread of the vaccine virus to unvaccinated persons represents a radical departure from accepted immunological practice. Among the issues concerned is the possibility that the virus might revert from its attenuated form to a more virulent type. However, the likelihood of the reversion seems to have been over-emphasised in the past; in practice such reversion does not seem to have been a factor of importance in the large number of vaccinations so far carried out. After vaccination with Sabin strains there is general agreement that reactions have been insignificant and there is no evidence that poliomyelitis has ever been induced.

An important consequence of the oral vaccination of susceptible persons is the development of local resistance in the gut. Local resistance induced by vaccination protects against the establishment in the gut of pathogenic virus acquired by natural infection and in this way prevents the excretion and spread of the pathogenic poliomyelitis virus. The general protection to the individual produced by oral vaccination, coupled with its capacity to prevent the carrier state, are factors which would make oral vaccination of special value in epidemics. Moreover, the dual protective effect of oral vaccine suggests the possibility that widespread vaccination of successive generations of children might banish poliomyelitis from certain communities. This would not be possible with Salk vaccine, which does not influence resistance of the gut to poliomyelitis virus.

The temporary establishment of the vaccine virus in the gut, which is necessary for effective vaccination, may be partially or completely prevented by the presence of other enteroviruses. In areas where such enteroviruses are highly prevalent, e.g. some tropical

communities, this interference may limit the scope for an oral vaccine. The extent to which interference will affect the use of oral vaccine has not yet been fully explored; the problem may possibly be overcome either by vaccination at a time of year when enterovirus infection is uncommon or by increasing the dose of the vaccine sufficiently to overcome the interference. The phenomenon of interference has been exploited in one epidemic where the feeding of a single type of oral vaccine virus prevented the establishment of a natural poliomyelitis virus of a different type, and justifies the hope that epidemics of poliomyelitis may be rapidly halted by widespread oral vaccination.

Interference is not confined to the effect of vaccine virus on pathogenic virus, but occurs also between the three types of attenuated virus components which constitute the vaccine. To prevent this interaction and provide adequate protection, the three types may be given separately at intervals of several weeks. The order so far recommended for routine use being type 1 followed by type 3 and finally type 2. Other combinations are continually under trial, and it is likely that the most suitable regime for one situation may not be the best one for another. Similarly, the best dose of vaccine in terms of virus content seems likely to vary in different conditions.

The vaccination procedure with oral vaccine is very simple. A common practice is to mix the dose of virus with a pleasant tasting syrup. A variety of media have been successfully used as vehicles for vaccination; in Russia, for example, the dose of vaccine has been given in the form of candy. The simplicity with which the vaccine can be administered is in contrast to the inoculations required by the Salk regime—an aspect of considerable importance to countries where skilled medical personnel are scarce. A possible limiting factor to the use of the vaccine in tropical countries, however, may be the transport and storage of the oral vaccine, which requires to be kept in refrigerated conditions. In Britain vaccination without injections is likely to increase the acceptance rate, a circumstance which of itself would improve the efficacy of any poliomyelitis vaccination campaign. Oral poliomyelitis vaccine is the simpler and cheaper to produce, and the cost of mass vaccination schemes with the simple vaccination methods employed with oral vaccine are likely to be relatively low.

Finally, the results so far available suggest that the difficulties encountered in vaccinating infants under six months against poliomyelitis—a useful procedure when a multiple antigen is employed—can be overcome by using oral vaccine.

Taking all these considerations into account, it seems that we have on the one hand Salk vaccine, a well-tried and effective method of poliomyelitis vaccination, and on the other a new vaccine with which we in Britain have less experience, but which clearly carries exciting possibilities for the control and perhaps eradication of poliomyelitis. When new vaccines appear it is wise to make certain of their safety and efficacy before advocating their widespread use; nevertheless, much experience of oral poliomyelitis vaccination has been gained elsewhere, and the decision of our own Ministry to use oral vaccine if required will be commended.

Footnote

Dr. Sabin, the American worker who developed oral vaccine against poliomyelitis, held a Press conference recently in London (the Wellcome Building). He expressed his belief that widespread use of oral vaccine would eliminate paralytic poliomyelitis. The three types of virus were given separately by the oral route—types 1, 3 and 2 in that order—at six-weekly intervals. Type 1 was responsible for 85 to 90 per cent. of cases of paralytic poliomyelitis and the oral vaccine produced immunity to that type within one week. He emphasised the importance of immunising children of the pre-school age because they caused the spread of infection. In the Soviet Union 77.5 million doses of oral vaccine had been given without any adverse effect.

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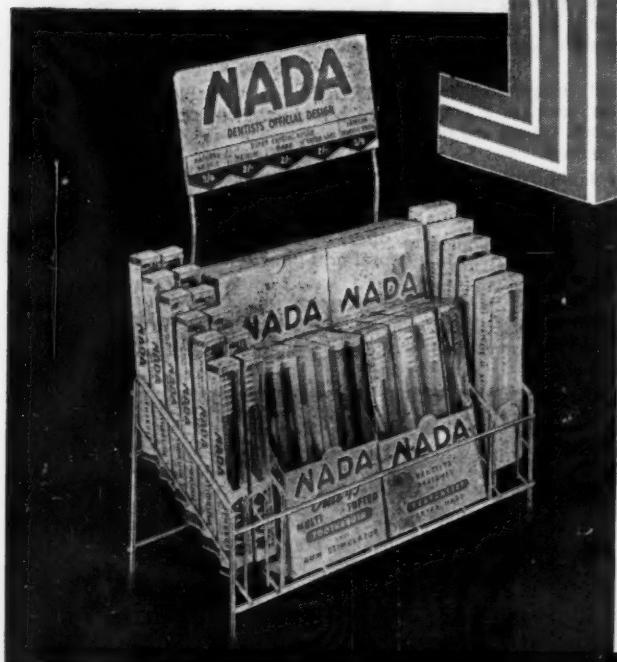
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ASPECTS OF THE CHEMISTRY OF ISOQUINOLINE ALKALOIDS

The Edinburgh and East Scotland Branch of the Royal Institute of Chemistry had a lecture by Dr. K. W. Bentley, chief research chemist of J. F. Macfarlan & Co. (and author of "The Chemistry of the Morphine Alkaloids"), in which he described recent work on Isoquinoline Alkaloids.

This originated from two hypothetical structures for the red poppy alkaloid, rhoeadine, one of which was subsequently proved to be correct by Czechoslovakian workers. In a study of compounds analogous to the possible structures for rhoeadine, papaverine methosulphate was reduced to (\pm)-laudanosine by sodium borohydride, and the same reagent reduced papaveridine to papaverinol and papaveraldine methosulphate to ketolaudanosine and α -hydroxylaudanosine. The hitherto unprepared ketolaudanosine was also obtained by Oppenauer oxidation of the hydroxy compound. Its methiodide was found to undergo rapid autoxidation and the intermediate hydroperoxy compound then oxidised the iodide ion, being itself reduced to an N-dimethyl carbinolamine which readily decomposed to a benzil derivative. The Hofmann degradation of ketolaudanosine, hydroxylaudanosine, and the diols resulting from lithium aluminium hydride reduction of narcotine and hydrastine were discussed, and the results compared with those observed during thermal decomposition of the corresponding tertiary amine oxides and the sodium-ammonia reduction of quaternary salts.—J. Royal Institute Chemistry, May 1961.

PHARMACEUTICAL EDUCATION IN GLASGOW

Professor J. P. Todd is to retire from the Chair of Pharmacy at the Royal College of Science and Technology, Glasgow, at the end of the present session.

He joined the former School of Pharmacy, Glasgow, in 1921, and was then the sole lecturer of this department. In 1937 he was appointed Professor of Pharmacy of the University of Glasgow. (The Royal College of Science and Technology is affiliated with the University.) This was the first Chair of Pharmacy in the U.K.

Professor Todd is to be succeeded by Dr. J. B. Stenlake, who since 1952 has been senior lecturer in pharmaceutical chemistry in the School of Pharmacy, Royal College of Science and Technology.

DETERGENT ALKYLATE PRODUCED IN GEELONG

Shell Chemical's new detergent alkylate plant at their Geelong Refinery will save £300,000 yearly in foreign exchange now and £500,000 within a few years.

The establishment of the plant—the first of its kind in Australia—reflects the local growth of the detergent industry.

Synthetic detergents have increased their share of the domestic soap and detergent market from 20 per cent. in 1958 to 45 per cent. at the present time.

Detergent alkylate is dodecyl benzene made by reaction of benzene and propylene tetramer. Sulphonation and neutralisation yield the detergent sodium dodecyl benzene sulphonate.

The alkylation reaction is carried out with large excess of benzene to ensure control of the reaction which is rapid; hydrofluoric acid is the catalyst.

The capacity of the Geelong plant is 7000 tons per annum, and it is anticipated that it will be able to meet the demands of the Australian detergent industry for some years to come.

JAMES SIMPSON: EARLY USE OF CHLOROFORM AS ANAESTHETIC

In the column "An Onlooker's Notebook," *Pharm. J.*, June 3, 1961, some interesting facts are recalled about the early use of chloroform:

"The name of James Young Simpson, an eminent Edinburgh gynaecologist, is forever linked with the use of chloroform as an anaesthetic. As a student, Simpson saw Liston operate on a Highland woman without an anaesthetic, and was much disturbed by the experience. He took up the chair of midwifery at Edinburgh, and when ether began to be used in America he adopted it for use in his obstetric work while also looking into the possibility of other anaesthetics. Chloroform was first used as an anaesthetic by the French physiologist, Flourens, who used it and proved its value in animal experiments. His findings were published in March, 1847, by the French Academy of Sciences. About eight months later, in October, 1847, David Walde, a Linlithgow-born chemist, was on holiday in Scotland from Liverpool, when he directed the attention of James Simpson to chloroform. Up till then chloric ether had been tried as a general anaesthetic with varying success, but Walde advised Professor Simpson that if chloric ether were used as an alternative to ether, then it was chiefly vapour of alcohol that would be inhaled, and suggested that pure chloroform should be tried. Although Walde promised to supply Simpson with some chloroform, he was prevented from doing so by a fire that occurred in his laboratory at the Liverpool Apothecaries Company. In a letter to the "The Scotsman" about 18 months ago Mr. Nicholas Herdman, of Duncan, Flockhart & Co. Ltd., Edinburgh, pointed out that there was a strong oral tradition within the Edinburgh companies of Duncan, Flockhart & Co. Ltd. and of T. & H. Smith Ltd., that Simpson, impatient for Walde to send some chloroform, went to Thomas Smith, then in business in the Pleasance, who, being occupied with other things that day, recommended him to try Duncan and Flockhart, who were in partnership in business in North Bridge. Duncan and Flockhart then asked Smith if he knew how to make chloroform, and for some years after that, before setting up their own plant, Duncan and Flockhart bought their chloroform from Smith."

THE ACTINOMYCIN GROUP OF ANTIBIOTICS

At a recent meeting of the Birmingham (Eng.) section of the Royal Institute of Chemistry, Professor A. N. Johnson gave a lecture on "The Actinomycin Group of Antibiotics." The *Journal of the Institute* (May, 1961) reported this as follows:

"The lecturer pointed out that actinomycin was isolated in 1941 by Waksman and Tishler and was the first important antibiotic to be obtained, preceding penicillin by about a year. The extreme toxicity of actinomycin seemed to preclude any chance of commercial exploitation, and for many years it remained a laboratory curiosity. However, the recent important demonstration that actinomycin has anti-tumour activity has revived both chemical and biological interest in the compound. The early chemical studies had revealed the nature of the five amino acids, each duplicated, in actinomycin: in actinomycin D these were L-threonine, D-valine, L-proline, sarcosine and L-N-methylvaline and in actinomycin C D-allosoleucine replaced D-valine. The hydroxyl group of the threonine unit is lactonised with the terminal carboxyl of L-N-methylvaline. The action of baryta gave a small yield of a peptide-free derivative, actinomycinol, which was eventually identified as 2,5-dihydroxy-3, 6-dimethylacridone-1, 4-quinone formed by a complex rearrangement of the actinomycin chromophore.

The 3-aminophenoxyzone chromophore was recognised by Brockmann on the basis of an interpretation of the products of acid decomposition of actinomycin and confirmed by the synthesis of a variety of related compounds. Brockmann has recently achieved a synthesis of actinomycin C, itself. Many members of the actinomycin family are now recognised, and these all contain the same chromophore and differ only in the nature of the peptides. Many variants of L-proline in the peptide chains have now been recognised; active compounds are known with hydroxyproline, ketoproline, sarcosine and piperolic acid replacing the proline. Furthermore, the two peptide chains need not be identical, and a degradative method was evolved by Bullock and Johnson to separate the chains and thus to examine each in turn. A biosynthetic method has been evolved to produce many new "unnatural" actinomycins which are at present being evaluated both by biochemical and clinical means. The existence of other antibiotics, e.g. viridogrisein or etamycin, staphylocin, echinomycin and antimycin, with an overall structure closely related to that of actinomycin, led to speculations on the mode of biogenesis of these compounds.

TREATMENT OF OBESITY: DIETHYLPROPION

In a double-blind trial of diethylpropion in obesity, D. A. Seaton and colleagues (Brit. Med. J. 1961, 1, 1009) treated 40 patients who had failed to respond to dietetic instruction.

Diethylpropion ($\text{C}_8\text{H}_{14}\text{COCH}(\text{CH}_3)\text{N}(\text{C}_2\text{H}_5)_2$) was given in a dose of 25 mgm. four times daily, and each patient reported at fortnightly intervals for 24 weeks. During the first eight weeks there was a significant decrease in weight in most of the patients receiving diethylpropion compared with those receiving dummy tablets, but only seven of 40 patients maintained a steady loss of weight over 12 weeks' treatment. Of the remainder, five increased weight steadily over the period of observation, three remained unchanged, 11 showed no change after an initial weight loss, and 14 gained weight after losing steadily for six to 10 weeks. The authors conclude that, in this trial, the absolute weight loss was disappointingly small and similar to that with the amphetamines and phenmetrazine.—Pharm. J., May 27, 1961.

GENERAL MEDICAL COUNCIL

APPROVED NAMES

Supplement 2 to Pamphlet of March 1961.

Approved Names are devised or selected by the British Pharmacopoeia Commission, and the intention is that if any of the drugs to which these Approved Names are applied should eventually be described in the British Pharmacopoeia the Approved Name should be its official title.

The issue of an Approved Name does not imply that the substance will necessarily be included in the British Pharmacopoeia or that the Commission is prepared to recommend the use of the substance in medicine.

Approved Names are adopted on the advice that they are free from conflict with trade marks registered in Great Britain and Northern Ireland. In some instances the names, other than the chemical names, appearing in the second column are applied to preparations of the substance; they also include some registered trade marks.

Supplementary List, July, 1961

Approved Name	Other Names
Bamipine	4-(<i>N</i> -Benzylanilino)-1-methyl-piperidine
Bucetin	Soventol <i>N</i> - β -Hydroxybutyryl- <i>p</i> -phenetidine
Chlorphentermine	4-Chloro- <i>aa</i> -dimethylphenethylamine
Diethadione	Lucofen is the hydrochloride
Halethazole	5:5-Diethyloxazolidine-2:4-dione
Halquinol	5-Chloro-2-(<i>p</i> -2-diethylaminoethoxyphenyl)-benzothiazole
	Episol
	A mixture of the chlorinated products of 8-hydroxyquinoline containing about 65 per cent. of 5:7-dichloro-8-hydroxyquinoline
Laurolinium Acetate	Quixalin 4-Amino-1-dodecylquinolinium acetate
Lynoestrenol	Laurodin 17 α -Ethyneoloestr-4-en-17 β -ol
Paramethasone	Orgametril 6 α -Fluoro-11 β :17 α :21-trihydroxy-16 α -methylpregna-1:4-diene-3:20-dione
Thenyldiamine	6 α -Fluoro-16 α -methylprednisolone
Tigloidine	Haldrone is the 21-acetate N'N'-Dimethyl-N-2-pyridyl-N-3-thienylethylenediamine Tiglylpseudotropeine

INDEX TO THE SUPPLEMENTARY LIST

Proprietary Name	Approved Name
Episol	Halethazole
Haldrone	Paramethasone
Laurodin	Laurolinium Acetate
Lucofen	Chlorphentermine
Orgametril	Lynoestrenol
Quixalin	Halquinol
Soventol	Bamipine

Communications relating to Approved Names should be addressed to The Secretary, British Pharmacopoeia Commission, General Medical Council Office, 44 Hallam Street, London, W.1.

STANNOUS FLUORIDE PASTE AS DENTAL PROPHYLACTIC

Public Health Reports—a publication of the United States Department of Health, Education and Welfare—carries an interesting note in its February issue concerning experimental work on the use of a stannous fluoride prophylaxis paste by the United States Air Force. The investigation was carried out by two dentists associated with the School of Aviation Medicine—Lt.-Col. Norman O. Harris and Major Vincent A. Segreto.

They reported that evidence of the superiority of stannous fluoride over sodium fluoride led to a research project for developing a prophylactic paste containing stannous fluoride and incorporating a stable chemical system that would block hydrolysis and oxidation of this anticariogenic agent.

With silicone for moistening and silex for abrasion, the mixture proved stable for at least a year, and it was four to seven times as effective as a 10 per cent. topical application of stannous fluoride in the protection of surfaces of extracted teeth *in vitro* decalcification.

Following pilot study reports of a number of adverse systemic and gingival reactions and low acceptance, the concentration of stannous fluoride was reduced, and sodium borate was added to mask the taste.

The authors concluded that there is no major contraindication in use of the paste by patients of all ages, so long as they are capable of following rinsing instructions.

Recent Additions

D.H.A. Products for N.H.S. Dispensing



D.H.A. OPHTHALMIC PREPARATIONS

DROPS

N.B.P. Eye Drops - - - - - 10 ml.

(See Item 629—Polymyxin c Bacitracin and Neomycin)

Neomycin Sulph., Bacitracin, Polymyxin B Sulph.
(5 mg.) (400 u.) (5000 u.) per ml.

HYDROCORTISONE Eye Drops 0.5% and 2.5% 5 ml.

NEOMYCIN Eye Drops - - - - - 10 ml.

(Neomycin Sulphate 5 mg. per ml.)

CORTISONE Eye Drops 0.5% 3ml. and 2.5% 5 ml.

OINTMENTS

HYDROCORTISONE Eye Ointment 0.5% 4G. Tube

PENICILLIN Ophthal. Ointment 2,000u 4G. Tube



EFFECTIVE . . .

Tyzine is tetrahydrozoline hydrochloride, a sympathomimetic amine with potent decongestant properties.

PROMPT AND PROLONGED ACTION . . .

Relief is almost immediate and lasts up to six hours or longer after a single administration.

Pfizer

Tyzine*

TETRAHYDROZOLINE HCl

NASAL DECONGESTANT

**NO REBOUND CONGESTION,
BURNING OR STINGING . . .**

Virtually free of sting or burn and rebound congestion . . . odourless, tasteless and without irritation.

IMPORTANT:

Use Tyzine Paediatric Nasal Drops (0.05%) for children under 6 years. The 0.1% concentration is contraindicated in this age group.



PFIZER CORPORATION, Box 57, P.O., West Ryde, N.S.W.

* Trademark of Chas Pfizer & Co. Inc.

AUS. P.J.3-63-61

MEDICAL SECTION

The Journal has pleasure in continuing a new feature this month. Medical notes will be contributed monthly by Dr. J. E. Aldred, who is a graduate in medicine and pharmacy.

By training and experience the pharmaceutical chemist is aware of the limitations imposed legally and ethically in relation to prescribing and treatment.

Authoritative knowledge of symptoms and treatment of common ailments however can be of very great value to chemist and customer alike, and can often aid him in reaching a decision as to whether a person should be directed to seek urgent medical advice.

The series will include articles on:

1. Common Diseases and Their Symptoms.
2. Current Trends in Treatment.
3. Therapeutic Notes.
4. Extracts from Medical History.
5. Topical Notes.

COMMON DISEASES AND EVALUATION OF SYMPTOMATOLOGY

ARTICLE No. 4 — PRESENT SERIES

INFECTIVE HEPATITIS

By Dr. J. E. Aldred.

Infective Hepatitis, as the name suggests, is an inflammatory affection of the liver which is "germ borne." The infecting agent is known to be a virus.

Although sporadic cases occur at all times, peaks which may reach epidemic proportions occur in the autumn months. The incubation period is long, being 15 to 30 days. The mode of infection is principally through excreta and possibly droplet infection.

In some epidemics water and milk have been incriminated as a vehicle of infection.

The disease is particularly likely to occur in epidemic proportions in areas with deficient sanitation. Cases may arise through careless contamination of foodstuffs and by ineffective measures of personal hygiene. Complete isolation of the patient is not necessary provided that precautions usual with other forms of excremental diseases are undertaken; that is to say, the eating utensils and receptacles for excreta are used only by the patient and thoroughly disinfected after use; that tissues for naso pharyngeal discharge are used and burned, and that contacts nursing the patient wash thoroughly after having attended to him.

The changes which occur in the liver consist of a zonal necrosis affecting the centrilobular cells. The reticulum is not involved, and therefore the basic pattern of hepatic structure remains unchanged. Thus in practically all cases there is complete regeneration of liver lobules without distortion or fibrosis when recovery occurs. The parenchymal cells swell, and this associated with inflammatory cell infiltration results in compression of the intrahepatic biliary ducts with dilatation of the intralobular canaliculari. The resultant jaundice is thus of a dual nature, the element of intra hepatic obstructive jaundice being superimposed upon hepatocellular jaundice.

The Symptoms

The prodromal symptoms manifest as those of any acute infectious disease. There is malaise, headache and shivering. This onset may be fairly gradual over quite a number of days and induce the sufferer to believe he is developing a "common cold."

Gastro intestinal symptoms may be prominent. Anorexia is common. Nausea, vomiting and diarrhoea may follow. Epigastric discomfort amounting often to

severe non-colicky pain may occur as peritoneum overlying the liver enlarges. There is some pyrexia as low as 99°F. to 101°F. or 102°F.

In quite mild cases the condition may subside after some days without the development of clinically detectable jaundice. In the early stages there are few physical signs, and the disease is exceedingly hard to diagnose.

In the usual moderately severe cases jaundice develops. The pre-icteric phase averages three to four days, but may be as little as one day or extend to some 10 or 14 days. The onset of jaundice is recognised by the deepening colour of the urine, which may become deep brown; by the lightening colour of the stools which come to resemble a putty colour, and the yellow colour of the sclera or white of the eye is soon followed by the typical yellowing of the skin. The jaundice deepens the more the element of obstruction to the biliary canaliculari develops. At this stage the liver is palpable, being smooth, tender and firm, but not hard. It is usually felt to extend about two finger breadths below the right costal margin, but may extend to the level of the umbilicus. Occasionally it is not palpable at all. This hepatomegaly or liver enlargement does not necessarily parallel the jaundice neither in onset nor intensity. It may in fact considerably precede the appearance of jaundice. In 15%-20% of cases the spleen is also palpable.

As with conditions in preceding articles, there is the atypical and the variant case in both the combination and intensity of symptoms.

In a small proportion of cases the onset is precipitous and resembles a severe influenza. The temperature can rise to 104°-105°. The patient is prostrate, suffers rigors and generalised aches, pains and headache. In these cases jaundice can be slower to appear. This severity of onset is paradoxically often compensated for by a relatively quick recovery.

Some of the milder cases show a fleeting icteric tinge in the sclera and skin with very few and mild concomitant symptoms.

Others present apparently as a mild coryzal type illness or a mild febrile "bilious attack" with vague abdominal discomfort and headache, but no jaundice. Such variants occur and are seen more in epidemics.

Obviously the diagnosis of these mild cases is difficult and may be impossible to make with any certainty. But the characteristic triad of anorexia, nausea and fever seen during peaks of epidemics particularly with slight liver enlargement and evidence of bile in the urine is very suggestive of the condition.

Jaundice itself is involved with respect to differential diagnosis, and will be dealt with in a subsequent article. Differentiation relies upon biochemical tests in the main, particularly liver function tests.

Course and Prognosis

The average case proceeds to complete recovery in three to six weeks. The mortality is very low, being of the order of 0.1% to 0.2%. Recovery is prejudiced in the undernourished or debilitated and where there has been previous liver damage from some other cause. Very rarely is the disease fulminant with death in the acute phase.

In other cases slower than usual convalescence marked by ease of fatigue, anorexia, dyspepsia and persistent liver enlargement constitutes the so-called "post hepatitis syndrome." In many cases these symptoms are psychogenic, but in some there is a continuing focal hepatic cell degeneration and inflammatory cell infiltration with increasing fibrosis progressing over months or years through chronic hepatitis until chronic hepatic insufficiency develops.

In other cases again there may be a relapse in late convalescence with subsequent subsidence of the recurrent symptoms and complete recovery.

Treatment

There is no specific therapy for acute infective hepatitis.

Bed rest is instituted and maintained until all evidence of activity has subsided. In the ideal, liver enlargement and tenderness should have retrogressed and appetite returned before getting up.

It is important to withhold drugs which depend for their inactivation upon the liver, e.g., barbiturates and morphine and hepatotoxic or potential hepatotoxic agents, e.g., chlorpromazine.

Diet. A series of diets has been arranged for use in cases of hepatitis, and can be chosen and modified according to the severity of the case and the underlying degree of liver damage. The principles on which these diets are based are:

- (i) High protein—particularly proteins rich in methionine; some authorities believe in the concomitant administration of methionine in amounts of 5 to 10 g. daily, since there has accumulated evidence from animal experiments of the value of methionine in preventing hepatic damage from dietary deficiencies. There is conflicting evidence as to its therapeutic value in established hepatic disease in man, and for this reason and its high cost it should not be routinely used in mild or moderate cases. In severe cases and with massive necrosis of the liver its intravenous use is justified.
- (ii) High carbohydrate intake of 400-600 Gms. daily to provide easily available energy and preserve protein stores in the liver.
- (iii) High caloric intake being from 2000-3000 cals. daily.
- (iv) Low fat intake restricted to 50 Gm. daily.
- (v) Vitamin B complex in amounts sufficient to cover the metabolism of the high carbohydrate intake.

These essentials of diet can be assured by offering the following foods daily:

Skimmed milk 2 to 3 pints; one or two eggs; lean meat 3 to 4 oz.

Sweetened fruit drinks; glucose, e.g., as barley sugar and white or brown sugar may be used liberally.

Butter is restricted to $\frac{1}{2}$ oz. or so.

It has been said that the best form of treatment of any illness is prevention. In the case of infective hepatitis the following preventive measures apply:

In the first instance the disease is notifiable, requiring a written certificate of notification to be forwarded to the local municipal authorities. This enables an epidemiological record to be built up, and can be valuable in detecting possible sources and carriers.

Secondly, the prophylactic administration of Immune Serum Globulins (Human) to all contacts. This product is a concentrated solution of the numerous components of the gamma globulin fraction of pooled normal human plasma prepared from blood taken from voluntary donors to the Australian Red Cross Society.

For Infective Hepatitis (Virus A hepatitis) 0.03 ml. per lb. bodyweight is used by deep intramuscular injection. It is dangerous if administered intravenously. In practice 5 ml. for the average adult and 2 ml. for a child is usual. It has been suggested that since the disease is usually milder in children that active immunity be encouraged by the use of a modifying dose which is half the usual prophylactic dose. In females at puberty, when pregnant and at post menopausal stage, and in infants under 12 months and children with existing illness, full doses should be used as a complete prophylactic measure, since the disease can be quite severe in these groups.

The value of gamma globulin in the prophylaxis of serum hepatitis (Virus B hepatitis) q.v. as homologous serum jaundice concluding this article is as yet undecided.

Reactions after the use of Immune serum globulin are rare as distinct from biological products employing horse serum. Transient muscle tenderness and stiffness may be expected. Urticaria occurs occasionally, but more serious reactions occur quite rarely.

Thirdly, in brief the preventive measures of efficient sanitation and personal hygiene, cleanliness in the handling and preparation of foodstuffs, and the isolation or barrier nursing of proven or suspected cases.

And now in summary: Acute Infective Hepatitis is a common infectious disease characterised by a febrile jaundice, a long incubation period, a low mortality rate, and happily in the majority of cases by complete recovery. It is characterised typically by general malaise, gastro intestinal symptoms, fever and jaundice. It is notifiable, and if suspected the probable patient and/or family, friends and other contacts are well advised to seek medical direction.

The causative agent is a virus, spread via human faeces or naso-pharyngeal secretions, and takes the gastro intestinal tract as its portal of entry.

Defective sanitation or personal hygiene are factors in spread, and water and milk may be vehicles.

Homologous Serum Jaundice

This condition is mentioned since it is very closely allied to infective hepatitis, and indeed much of our knowledge of the causation of infective hepatitis has come through the study of homologous serum jaundice.

This condition too is a form of viral hepatitis, and has been shown to occur in a very small proportion of patients who have had injections of human serum, plasma and rarely blood more so after transfusion with pooled human plasma or inoculations for measles, mumps or yellow fever. It has been noted after hypodermic injections. In such cases contamination of syringe or needle with the virus is responsible. The virus is extremely resistant to heat and disinfectants, and survives storage at low temperatures for long periods. It is believed that the virus is carried in the blood stream of certain "carriers" without production of symptoms, and that it is very closely allied to the infective hepatitis virus. The course of the two diseases is similar. Cases of homologous serum jaundice are usually milder, but have a somewhat higher mortality. Infective hepatitis is by far the commoner condition. The big difference between the two is the much longer incubation period of homologous serum jaundice being somewhat of the order of 40 to 120 days.

British Pharmacopoeia Commission

Report on 1963 B.P.

The British Pharmacopoeia Commission has reported to the Pharmacopoeia Committee of the General Medical Council on the preparation of the next edition of the B.P. which is intended to be published in 1963. The report gives lists of proposed deletions from and additions to the new Pharmacopoeia, and recommends that *mcg.* be used as the abbreviation for "microgram."

It is pointed out that before selecting monographs for inclusion in the 1963 B.P., the Commission invited a large number of medical and pharmaceutical experts in the United Kingdom and the Commonwealth to express their views on the scope of the Pharmacopoeia. The reports received have been carefully considered, and lists of monographs proposed for deletion from or addition to the Pharmacopoeia drawn up as a result. The inclusion of the new monographs is subject to the compilation of satisfactory specifications within the time available.

The Commission has discussed the adoption of an abbreviation of "microgram" for use in medical and pharmaceutical practice. The present pharmacopoeial monographs on the few drugs, such as cyanocobalamin, which are administered in quantities of less than 1 mgm., express the doses in micrograms without the use of an abbreviation. The number of drugs that are administered in microgram quantities is increasing, and it is considered important to establish an abbreviation of the term for general use in expressing doses and strengths of preparations. In some sciences " μg " or " γ " (gamma) are used, but neither abbreviation is suitable for the expression of small amounts of drugs in written prescriptions on account of the danger of confusion with other abbreviations, such as "mg" and "g". The Commission recommends the adoption of "mcg" because this abbreviation is less likely to be mistaken for other abbreviations, and it is already used in some countries; it has been adopted by the Pharmacopoeia of the United States. It is proposed to use "mcg." in the next edition of the British Pharmacopoeia, and the Commission would welcome its general adoption in medicine and pharmacy as the abbreviation of microgram in reference to drugs.

Recommended Deletions and Additions

Deletions	Additions
Acetic Acid, Glacial	Chloroxylenol Solution
Amethocaine Injection	Chlortetracycline Injection
Ammonia Solution, Dilute	Cinnamon Oil
Ammonia Solution, Strong	Cinnamon Water, Concentrated
Amphetamine	Copper Sulphate
Azovan Blue	Dextran Sulphate
Benzathine Penicillin Tablets	Dextran Sulphate Injection
Benzoin	Dick Control
Benzoin Tincture, Compound	Dick Test Toxin
Bismuth Oxychloride	Dihydrostreptomycin Sulphate
Bismuth Oxychloride Injection	Dihydrostreptomycin Sulphate Injection
Bismuth Sodium Tartrate	Dill Oil
Bismuth Sodium Tartrate Injection	Dill Water, Concentrated
Cade Oil	Ephedrine
Camphor Water	Ethanolamine
Carbarsone	Ethanolamine Oleate
Carbarsone Tablets	Injection
Chiniofon Sodium	Ethyl Bisoumacetate
Chiniofon Sodium Tablets	Ethyl Bisoumacetate Tablets
Chlorinated Soda Solution, Surgical	Eucalyptol
Chloroxylénol	Hexamethonium Tartrate Tablets
	Hydrocortisone Injection
	Iodine Solution, Strong
	Iodoxyl
	Iodoxyl Injection
	Leptazol
	Leptazol Injection
	Magnesium Oxide, Heavy
	Male Fern Extract Capsules
	Malt Extract
	Malt Extract with Cod-liver Oil
	Menaphthone
	Menaphthone Sodium Bisulphite
	Menaphthone Sodium Bisulphite Injection
	Mephenesin
	Mephenesin Injection
	Mercuric Oxide, Yellow
	Mercuric Oxide Eye Ointment
	Mercury
	Nicotinamide Injection
	Nicotinamide Tablets
	Ouabain
	Ouabain Injection
	Oxytetracycline and Procaine Injection
	Paraffin, Liquid, Emulsion
	Paraffin, Liquid, Light
	Pentolinium Tablets
	Peppermint Spirit
	Pheniodol
	Phenol Glycerin
	Potassium Acid Tartrate
	Potassium Bicarbonate
	Riboflavin Tablets
	Rosemary Oil
	Scarlet Fever Prophylactic
	Silver Protein
	Soap Liniment
	Sodium Carbonate
	Starch Glycerin
	Storax, Prepared
	Stramonium Dry Extract
	Strychnine Hydrochloride Solution
	Strychnine Hydrochloride Sulphuanidine
	Sulphuanidine Tablets
	Sulphamerazine
	Sulphamerazine Tablets
	Sulphur, Sublimed
	Tannic Acid Glycerin
	Terpineol
	Tetracycline and Procaine Injection
	Urea
	Vanillin
	Zinc Stearate
	Additions
	Acetrizoic Acid
	Alcohol, Dehydrated
	Aminopterin Sodium
	Aminopterin Tablets
	Amphotericin B
	Amphotericin Injection
	Bendrofluazide
	Bendrofluazide Tablets
	Benzalkonium Chloride Solution
	Benztropine Methanesulphonate
	Benztropine Tablets
	Botulinum Antitoxin
	Bretylum Tosylate
	Bretylum Tablets
	Calcium Aminosalicylate Tablets
	Calcium Aminosalicylate
	Caramiphen Hydrochloride
	Caramiphen Tablets
	Cetylpyridinium Chloride
	Chlorambucil
	Chlorambucil Tablets
	Chlorphenesin
	Chlorpheniramine Maleate
	Chlorpheniramine Injection
	Chlorpheniramine Tablets
	Chlorpropamide
	Chlorpropamide Tablets
	Citric Acid, Anhydrous
	Crotamiton
	Cyclizine Hydrochloride
	Cyclizine Tablets
	Cyclomethycaine Sulphate
	Cycloserine
	Cycloserine Capsules
	Cycloserine Tablets
	Demethylchlortetracycline Hydrochloride
	Demethylchlortetracycline Capsules
	Deoxycortone Trimethylacetate
	Deoxycortone Trimethylacetate Injection
	Dequalinium Acetate
	Dequalinium Chloride
	Dexamethasone
	Dexamethasone Tablets
	Dexamethasone Acetate
	Dexamethasone Acetate Tablets
	Dextromethorphan Hydrobromide
	Dextromethorphan Tablets
	Diamorphine Hydrochloride
	Diamorphine Injection
	Dibromopropamidine Isethionate
	Dichlorphenamide
	Dichlorphenamide Tablets
	Diethazine Hydrochloride
	Diethazine Tablets
	Digitoxin
	Digitoxin Tablets
	Diloxanide Furoate
	Diloxanide Tablets
	Dimenhydrinate
	Dimenhydrinate Injection
	Dimenhydrinate Tablets
	Dimethylsterone
	Dimethylsterone Tablets
	Diphenhydramine Injection

Dipipanone Hydrochloride	Imipramine Hydrochloride	Methylpentynol Capsules	Propyl Gallate
Dipipanone Injection	Imipramine Tablets	Methylprednisolone	Propyl Hydroxybenzoate
Ditophal	Influenza Vaccine	Methylprednisolone	Protamine Sulphate
Domiphen Bromide	Isophane Insulin Injection	Tablets	Injection
Edrophonium Chloride	Iodipamide Methylglu-	Methyprylone	Pyridoxine Hydrochloride
Edrophonium Injection	caine Injection	Methyprylone Tablets	
Erythromycin Estolate	Iophendylate Injection	Nandrolone Phenyl-	Rabies Antiserum
Erythromycin Estolate	Iron Dextran Injection	propionate	Rabies Vaccine
Capsules	Isopropyl Alcohol	Nandrolone Injection	Radioferric Chloride (⁵⁵ Fe)
Erythromycin Stearate	Levallorphan Tartrate	Nitrofurantoin	Radiogold (¹⁹⁸ Au)
Erythromycin Stearate	Levallorphan Injection	Nitrofurantoin Tablets	Senna Preparations,
Tablets	Levorphanol Tartrate	Norethandrolone	Standardised
Ethtoin	Levorphanol Injection	Norethandrolone Tablets	Sodium Acetrizoate
Ethtoin Tablets	Levorphanol Tablets	Norethisterone	Injection
Eugenol	Magnesium Stearate	Norethisterone Tablets	Sodium Anoxynaphthonate
Fludrocortisone Acetate	Maize Oil	Noscapine	Sodium Calciumedetate
Fludrocortisone Tablets	Mecamylamine Hydro-	Nystatin	Sodium Calciumedetate
Fluoxymesterone	chloride	Paracetamol	Tablets
Fluoxymesterone Tablets	Mecamylamine Tablets	Paracetamol Tablets	Sodium Diatrizoate
Glutethimide	Meclozine Hydrochloride	Pempidine Tartrate	Sodium Diatrizoate
Glutethimide Tablets	Meclozine Tablets	Pempidine Tablets	Injection
Griseofulvin	Melarsoprol	Pentaerythritol	Sodium Fluoride
Griseofulvin Tablets	Melarsoprol Injection	Tetranitrate	Sodium Lactate Injection
Guanethidine Sulphate	Mephentermine Sulphate	Pentaerythritol	Sodium Radiochromate
Guanethidine Tablets	Mephentermine Injection	Tetranitrate Tablets	(⁵⁵ Cr)
Hexachlorophane	Meprobamate	Perphenazine	Sodium Radio-iodide (¹³¹ I)
Hydralazine Hydro-	Meprobamate Tablets	Perphenazine Tablets	Staphylococcus Antitoxin
chloride	Mepyramine	Phanquone	Sulphafurazole
Hydralazine Tablets	Mepyramine Injection	Phanquone Tablets	Sulphafurazole Tablets
Hydrochlorothiazide	Methandienone	Phenelzine	Sulphamethizole
Hydrochlorothiazide	Methandienone Tablets	Phenelzine Tablets	Sulphamethizole Tablets
Tablets	Methicillin Sodium	Phenoxybenzamine	Sulphamethoxypyridazine
Hydroflumethiazide	Methicillin Injection	Hydrochloride	Sulphamethoxypyridazine
Hydroflumethiazide	Methotrexate	Phenoxybenzamine	Tablets
Tablets	Methotrexate Tablets	Capsules	Sulphasomidine
Phenacetin	Methyl Hydroxybenzoate	Phentolamine Hydro-	Sulphasomidine Tablets
Tablets	Methylcellulose	chloride	Sulphobromophthalein
	Methylpentynol	Phentolamine Tablets	Sodium

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Rabies Antiserum	Rabies Vaccine
Rabies Vaccine	Radioferric Chloride (⁵⁵ Fe)
Radioferric Chloride (⁵⁵ Fe)	Radiogold (¹⁹⁸ Au)
Radiogold (¹⁹⁸ Au)	Senna Preparations,
Senna Preparations,	Standardised
Standardised	Sodium Acetrizoate
Sodium Acetrizoate	Injection
Injection	Sodium Anoxynaphthonate
Sodium Anoxynaphthonate	Sodium Calciumedetate
Sodium Calciumedetate	Sodium Calciumedetate
Sodium Calciumedetate	Injection
Injection	Sodium Calciumedetate
Sodium Calciumedetate	Tablets
Tablets	Sodium Diatrizoate
Sodium Diatrizoate	Sodium Diatrizoate
Sodium Diatrizoate	Injection
Injection	Sodium Fluoride
Sodium Fluoride	Sodium Lactate Injection
Sodium Lactate Injection	Sodium Radiochromate
Sodium Radiochromate	(⁵⁵ Cr)
(⁵⁵ Cr)	Sodium Radio-iodide (¹³¹ I)
Sodium Radio-iodide (¹³¹ I)	Staphylococcus Antitoxin
Staphylococcus Antitoxin	Sulphafurazole
Sulphafurazole	Sulphafurazole Tablets
Sulphafurazole Tablets	Sulphamethizole
Sulphamethizole	Sulphamethizole Tablets
Sulphamethizole Tablets	Sulphamethoxypyridazine
Sulphamethoxypyridazine	Sulphamethoxypyridazine
Sulphamethoxypyridazine	Tablets
Tablets	Sulphasomidine
Sulphasomidine	Sulphasomidine Tablets
Sulphasomidine Tablets	Sulphobromophthalein
Sulphobromophthalein	Sodium
Sodium	Sutures, Surgical, Non-
Sutures, Surgical, Non-	absorbable
absorbable	Talc, Purified
Talc, Purified	Testosterone Phenyl-
Testosterone Phenyl-	propionate
propionate	Testosterone Phenyl-
Testosterone Phenyl-	propionate
propionate	Injection
Injection	Thalidomide
Thalidomide	Thalidomide Tablets
Thalidomide Tablets	Thiambutosine
Thiambutosine	Thiambutosine Tablets
Thiambutosine Tablets	Thiordiazine Hydrochloride
Thiordiazine Hydrochloride	Thiordiazine Tablets
Thiordiazine Tablets	Thiotepa; Thiotepa
Thiotepa; Thiotepa	Injection
Injection	Trifluoperazine Hydro-
Trifluoperazine Hydro-	chloride
chloride	Trifluoperazine Tablets
Trifluoperazine Tablets	Trimetaphan Camphor-
Trimetaphan Camphor-	sulphonate
sulphonate	Trimetaphan Injection
Trimetaphan Injection	Tripeleannamine Tablets
Tripeleannamine Tablets	Viomycin Sulphate
Viomycin Sulphate	Viomycin Injection
Viomycin Injection	Vitamin A Acetate
Vitamin A Acetate	Vitamin A Palmitate
Vitamin A Palmitate	Warfarin Sodium
Warfarin Sodium	Warfarin Tablets

—(From "The Pharmaceutical Journal".)

The Teaching of Pharmaceutics in the U.S.A.

W. J. O'Reilly, Ph.D., Pharmacy Department, University of Sydney—H. W. Woods Travelling Scholar

Broad Objectives

My principal experience was with the School of Pharmacy, University of California, San Francisco, and I am, therefore, concerned mainly with impressions gathered there. I visited quite a number of other schools for short periods, but I do not propose to discuss the organisation of these schools. From discussions with various staff members I gathered that the problems I found at the University of California were common to most schools. Also, I do not think that a short visit to an institution is likely to give one more than a very shallow idea of their organisation, methods and problems.

In the United States at the moment the broad objectives of raising educational standards in pharmacy have been reached. A six-year requirement is needed for the pharmacy degree—divided into two years of pre-professional and four years of professional training—at the University of California. The first two years are fairly low grade, so far as scientific education goes, and would, I think, bring the student up to about the standard reached by a first-year science student in an Australian university. This, nonetheless, leaves the ample time of four years for completion of the professional formation of a pharmacist.

Six-Year Course

By virtue of the length of training, California occupies rather a special place in pharmaceutical education in the United States. Elsewhere for some years the requirement has been one year pre-professional and three years of professional training, making a four-year course. California previously had a two years pre-professional and a three years professional requirement for a bachelor's degree and a two years pre-professional and a four years professional requirement for the doctorate in pharmacy. Now the two years, plus four years, doctorate plan of study has been made the only available course at the University of California.

Transition From Old System

The important point I would like to make in this introduction is that the picture I draw is one of transition—the courses, particularly in pharmaceutics, at the University of California are very much in a process of development.

The aim of pharmaceutical education is to produce a man capable of acting as a drug consultant—a person who renders a service to both public and physician alike by virtue of his knowledge of the drug field. I do not think that there is any need to elaborate on this point, since it is also our basic aim, but it should be remembered in relation to the teaching of pharmaceutics.

There is no subject known as **pharmaceutics** in pharmaceutical curricula in the United States and when I use the word it is to cover those academic courses not specifically chemical or biological. Table I briefly outlines the course in pharmacy given in the University and is divided into three main streams covering only the last four professional years. Training in pharmaceutics begins in the first professional year with courses covering basic aspects of pharmacy—historical, weights and measures, types of preparations, simple pharmaceutical calculations and reference books—but the year is mainly devoted to organic chemistry and biological studies. In the second year the emphasis is on physical chemistry, but much time is spent in the study of theoretical and applied pharmacy. This course introduces the student to pharmaceutical technique and products—galenicals, mixtures, ointments, emulsions, creams, suppositories, pills and tablets. Most of the time is spent in practical sessions, but lectures are used to give a rational basis to the methods taught. Although the students are still studying physical chemistry, some attempt is made to integrate pharmaceutical principles with those of physical chemistry. Later the physicochemical approach becomes more important.

TABLE I

	Chemical Stream	Biological Stream	Pharmaceutical Stream
Year I	Quantitative analysis Organic chemistry Organic chemistry, practical Inorganic pharm. chem.	Anatomy Microbiology Pharmacognosy	Introductory pharmacy Economics
Year II	Physical chemistry Natural products Synthesis of organic medicinals	Biochemistry Physiology	Theoretical and applied pharmacy Forensic pharmacy
Year III*	Pharmaceutical organic chemistry Pharmaceutical analysis and control	Pathology Pharmacology and toxicology	Dispensing
Year IV*	Antibiotics	Parasitology Pharmacology Public health	Pharmaceutical formulation

* In the third and fourth years besides the prescribed courses shown, taken by all students, various electives are available.

The third and fourth professional years are, at the moment, in a state of transition. Previously, when many students finished at the end of third year and took a bachelor's degree, dispensing was taught for the whole of the last year, but now that students will spend a year longer in the school, the course is being reorganised. I will discuss the doctorate programme that was taught when I was in California; that is, the old course, which was optional. Later I will mention the plan of reorganisation.

Dispensing

Under the old scheme third-year students took courses in pharmaceutical chemistry and analysis of drugs, a very extensive and fine course in pharmacology (taught to medical and pharmacy students), as well as pharmaceutics. The course in pharmacology consisted of three lectures and six hours' practical work per week throughout the year. The dispensing was taught in rather an interesting fashion. The approach is to teach the students the art of dispensing for practical purposes. The types of products made were rather simple; solutions, mixtures, ointments, creams were prepared. It must be remembered that in practice in the United States relatively little compounding is required. With this in mind the main objectives of the dispensing course are:

1. To familiarise the students with the simple skills of his trade.
2. To accustom him to dispensing. For this purpose the class work is made as realistic as possible—written prescriptions, labelling requirements, approach to prescribers, pricing and presentation are all emphasised.
3. To acquaint students with proprietary lines. Prescriptions for proprietaries are given in exercises. The preparations are kept in a large museum-type room and new products are constantly added. During the exercise the product is examined and comments are made on the pharmaceutical formulation, the pharmacological and therapeutic problems involved and comparisons are made with other products with the same or related pharmacological properties or therapeutic uses.
4. To train students to evaluate the products and the proprietaries they meet in terms of physicochemical aspects of formulation and their therapeutic uses. For example, with ointments, they are expected to understand the factors contributing to stability and absorption.

The main problem in transition from the old course to the new course is to determine the place of dispensing in the curriculum. Since it is in dispensing that the student integrates his physicochemical, pharmacological and pharmaceutical training, dispensing should be taught after the basic training. Under the conditions of the old course in California this integration was possible only to a limited degree as pharmacology was taught simultaneously with dispensing. The new approach seems to involve the teaching of some dispensing in the third year, then proceeding to drug product formulation and finally finishing with dispensing in the final year. This seems to be the ideal arrangement, in that the student brings all the basic training and knowledge he has accumulated previously to his final course in dispensing.

Product Formulation

Under the old system drug product formulation was taught in the final year, particularly in the first semester. This course attempts to convey the basic scientific principles behind the formulation of pharmaceutical products. Lectures and experimental work cover topics such as solubility problems in pharmacy, rheology, release of drugs from ointment bases and suppositories, stability studies on pharmaceutical products, the physics of tablet formulation, sustained release medication and other problems of drug release and absorption.

All of these fields and others are treated with heavy emphasis on kinetics as a method of approach to pharmaceutical problems.

In the second semester the practical work consisted of student projects involving experimental work, a literature search and the writing of a report. Typical projects were: studies of absorption rate of sodium salicylate with various tablet formulations, the students themselves as subjects; formulation of various special purpose ointment bases and aerosol preparations.

Electives

During the last two years students are permitted to choose various courses known as "electives." This enables the student to specialise somewhat and he can choose a pattern of training for various specialities besides general pharmacy. A number of students elect to enter the graduate school and they can take courses of a more purely scientific interest. Others interested in manufacturing can choose courses in manufacturing pharmacy and various aspects of analysis, statistics and business. The student who wishes to work in a hospital can actually gain experience by serving his internship in the University of California hospital pharmacy during his fourth year and complete the internship with a subsequent year.

The courses of the elective subjects are specialised but the general pharmacist has a wide scope in his choice of electives. Several of these elective courses are interesting; for example, the course in external drug products enlarges on the drug formulation studies, more particularly ointment, cream and lotion formulations. This subject is particularly interesting to students who will enter a manufacturing firm and to people who will work with dermatologists.

Manufacturing

The course in manufacturing pharmacy involves training in the large manufacturing laboratory in the School of Pharmacy, which provides products for use in the University hospital and related institutions. All forms of production are handled and the students gain experience in product analysis and control.

The course in parenteral products is also an elective course at California and is intended mainly for hospital pharmacists and manufacturing pharmacists. However, although a pharmacist may use this technique rarely, if at all, I feel that he should know all the techniques of his trade, as well as possessing the necessary knowledge if he is to practise as a well-rounded professional man. I consider that this course should be a compulsory course and not an optional course.

A Comparison

To complete this survey I would like to make a few observations on the philosophical basis and the value of the training in pharmaceutics in the University of California and the University of Sydney. Our basic aims are the same as in California; we hope to produce an able technician with an adequate grounding in basic sciences to fit him to be a drug consultant or authority on drugs. I think that we have advantages in a sounder and more extensive training in matters of technique. The American student has an enormous advantage in his length of training and the students themselves have a mature approach to their work which is lacking in most Australian students. Moreover, more work can be done in four years than in two years; the greatest benefit of the longer course is the opportunity to give a background of physical chemistry and pharmacology before most of the pharmaceutics is taught, so giving the student's knowledge greater depth and solidity. The emphasis on biological subjects produces a pharmacist pre-eminently suited to be an expert on drugs. If the basic training cannot be given before teaching pharmaceutics the deficiency may be overcome to some extent by trying to incorporate physical chemistry into pharmaceutics. The two subjects can be taught almost as one, as is done, for example, in Martin's book, "Physical Pharmacy," and dispensing training can be given simultaneously. I consider that this method should train the student to be a competent worker who understands the scientific basis of the art of pharmaceutics.

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Australian Pharmaceutical Science Association's Inaugural Meeting

Minutes of Meeting Held 31/5/61 at the Queensland University, St. Lucia, Brisbane

The meeting followed the circulation some months previously of a proposal for the formation of an association to be called the Australian Pharmaceutical Science Association. The proposal, with copies of a suitable constitution for this type of body, was circulated widely through interested parties, and a session was reserved in the A.N.Z.A.A.S. programme for this purpose. The meeting was chaired by Dr. Watson, President of Section O of A.N.Z.A.A.S. Dr. Watson introduced Professor Wright, who explained to the meeting that the handling of A.N.Z.A.A.S. technical programmes in many other sections is arranged with the help of associations of a permanent type. These associations sometimes meet between the A.N.Z.A.A.S. meetings as well as just prior to A.N.Z.A.A.S., and may present papers and perform functions supplementary to the purpose of A.N.Z.A.A.S. meetings.

Within Section O, difficulty has arisen because of a lack of continuity in the organisation of this type of activity. It has become apparent that there is a need for more than an organisation of qualified pharmacists only as Section O is intended to be of interest to other professions.

Professor Wright explained that brochures had been sent out at his initiative and that 150 replies had been received supporting the idea. A draft constitution had been sent out asking for comments, and some of the comments made were outlined by Professor Wright.

Some criticisms had been made of the proposed name, but it was considered these were of little importance.

In the third line "solely" was considered to be irrelevant. It had been suggested that membership should be limited to all suitably qualified persons interested in pharmacy, but Professor Wright explained he did not favour this restriction.

It had been suggested that the annual subscription of 10/- might be raised to £1.

It was pointed out no provision had been made for a President. This was intentional, but it will be necessary to appoint a Chairman for any meetings.

Under the heading "Elections," the word "financial" ought to be inserted before "members."

The second sentence should read "At least three States should be represented on the Council, provided three members offer, and for the purpose of this ruling the A.C.T. is to be considered as a State."

Under the heading "General Meeting" a line should be inserted before the paragraph (a) viz. "the General Meeting shall"—

Having presented the above summary of criticisms and discussions held before the meeting, Professor Wright then suggested that consideration should be given to the formation of an Association along these lines and that details of its constitution should then be discussed.

It was moved by Mr. Barker and seconded by Dr. Watson "That an Australian Pharmaceutical Science Association should be formed." The motion was subsequently carried.

In discussion on the motion Dr. Dare of Queensland University compared the new Association with the British Pharmaceutical Conference which is very similar; the Pharmaceutical Society of Great Britain acts as guarantor to the Pharmaceutical Conference which is open to anybody interested provided they are

nominated and accepted. Membership is encouraged to be very wide. He strongly supports the proposed body.

Mr. Long of Victoria spoke of the need to bring those outside the practice of pure pharmacy into the field of interest. He suggested that the Association ought to be under the control of the Pharmaceutical Societies and also that the membership subscription ought to be higher than 10/-.

Mr. Braithwaite of Victoria spoke on behalf of the Pharmaceutical Association of Australia (P.A.A.), whose members are the various State pharmaceutical bodies. He said P.A.A. would be interested in supporting the Association, but at the same time he could not assure the meeting that A.P.S.A. would be acceptable as a member of P.A.A. because the bodies which so far comprise P.A.A. are strictly limited to registered pharmaceutical chemists. Some constitutional change would be necessary if P.A.A. were to accept a body as a member if it included persons other than registered pharmacists.

Mr. F. C. Kent, representing the "A.J.P." supported the move for the formation of the Association, and expressed the hope that it would result in a better supply of technical articles of a high standard to the Journal, as the Editorial Committee had found it difficult to get material from Australian authors.

Mr. Colcheadas of Victoria suggested that the objects of the Association could be more carefully defined to give a fine balance between academic and industrial interests, but the meeting considered that this aspect should be covered by the selection of Council members.

Dr. McHugh, N.S.W., asked whether other meetings were proposed. Professor Wright pointed out that an annual general meeting is not intended, but rather that general meetings should be held when appropriate, principally at the time of A.N.Z.A.A.S. meetings, but that other meetings might be held besides. Similar societies in other branches of science usually have at least one meeting between conferences.

Mr. S. J. Baird, Victoria, suggested that the number of meetings could be restricted to not more than two annually, as attending such meetings especially by those travelling interstate would be a considerable financial effort. While the Institute of Food Technology does have successful interstate meetings of this kind, it was pointed out that they do not also take part in A.N.Z.A.A.S. conferences.

Mr. K. D. Johnson, South Australia, asked if the British conference is a continuing membership and if any other British body has such an objective, namely the advancement of pharmaceutical science.

Dr. Dare replied that all members of the society are automatic members of the conference, and that non-members of the society pay 5/- a year affiliation fee for membership of the pharmaceutical conference. There is no other British body with the same objectives, but the Pharmaceutical Society itself has occasional *ad hoc* special meetings on subjects of scientific interest.

Mr. K. D. Johnson, presenting the views of the Pharmaceutical Society of South Australia, declared that one of the aims of the South Australian Society is the advancement of Pharmaceutical Science, and they would prefer to see this object promoted by P.A.A. rather than another splinter group within the profession.

He suggested further that the South Australian Society would like to see science papers, particularly those

from A.N.Z.A.A.S. conferences, published as a journal supplement to the "A.J.P."

Professor Wright replied that the idea of a supplement would be examined by the Council of A.P.S.A. Committee. He pointed out the Association would not control Section O, but would have a strong interest in its promotion, and stressed again that one of the important objects of A.P.S.A. was to foster interest from professions outside the range of Pharmaceutical Societies.

Lieut.-Colonel Gay, Victoria, supporting the motion, said the proposed Association should actively promote Section O, that higher affiliation fees than 10/- should be necessary, and suggested close liaison with commercial pharmaceutical houses who gain considerable benefit from the Association and from whom financial assistance might be expected. He pressed for a close link with P.A.A., and would personally deplore closing the Association out of the P.A.A. He supported the idea of a supplement to the Journal on an annual basis. He volunteered his service in this regard.

Mr. R. M. W. Cunningham, Department of Health, Canberra, supported the move to foster pharmaceutical science, and promised all the support possible within his own division and sphere of influence.

Mr. A. R. Green of Sydney, as a non-pharmacist working closely in pharmaceutical circles, supported the move for the Association.

Mr. J. T. Pederson, Department of Public Health, Papua, spoke of the difficulty in New Guinea of maintaining contact professionally, and would welcome any chance to improve communications in matters of pharmaceutical science.

Mr. G. Wells, for the Council of the Queensland Pharmaceutical Society, supported the motion, but would prefer to see the responsibility for organising A.N.Z.A.A.S. Section O written more definitely into the constitution.

Professor Wright replied that this was very difficult, as A.N.Z.A.A.S. is a separate organisation, and he would prefer the responsibility to be only implied, so that other persons or bodies could independently contribute to Section O.

Mr. Braithwaite, on behalf of P.A.A., emphasised again that he was not opposed to the inclusion of A.P.S.A. within P.A.A., and hoped that a way would be found to affiliate the two bodies.

The motion was then put to the meeting and carried.

The draft constitution was studied by the meeting, and agreement was reached as follows:

Name: No alteration.

Objects: No alteration.

Lieut.-Colonel Gay called for more discussion on the subject of the Association's responsibility for organising Section O, and Dr. Wells agreed with this point. Dr. Dare suggested that the Society of the State in which A.N.Z.A.A.S. was to be held next should make all local arrangements except for the getting of speakers for the programme. This would follow the practice of the British Pharmaceutical Conference. Lieut.-Colonel Gay agreed that the Societies must be involved, and supported Dr. Dare that A.P.S.A. can take the technical responsibility.

Mr. K. D. Johnson, South Australia, asked for a definition of pharmaceutical science, but after some discussion no such definition could be simply provided. A wide understanding of the term is required, and it may include such disciplines as Pharmacology and Biochemistry.

Membership. The draft constitution was accepted with the alteration of subscription to £1 on the motion of Mr. Barker.

An amendment that 10/- should be the subscription for students was not accepted.

Mr. Braithwaite suggested that there should be a limit to qualification for membership to make it fit more easily into P.A.A. structure.

A motion by Mr. Barker seconded by Mr. Anderson was carried unanimously: "That membership shall be

restricted to (1) Foundation members of the Association, (2) Anyone nominated by two members of the Association and approved by the Council." A third class, namely "Registered pharmacists and anyone holding a degree of diploma," was rejected as unnecessary.

Dr. McHugh asked for clarification of the Association's relation to P.A.A., but this could not be provided.

Mr. A. Green would object to the motion, if non-qualified members were omitted. He was assured that this was not so.

Mr. White visualised that A.P.S.A. meetings would be similar to those of the Australian Physiological Society where attendance at meetings was not restricted to members, although voting on any action was so restricted.

Constitution. A motion by Mr. A. Green, seconded by Dr. Watson, "That the remainder of the constitution be adopted," was carried.

Officers. The following officers were elected:

Secretary: Professor S. E. Wright, Sydney University.

Treasurer: W. F. Wilson, Burroughs, Wellcome & Co., Rosebery, Sydney.

Council Members: Dr. J. D. Dare, Department of Pharmacy, University of Queensland; R. M. W. Cunningham, Department of Health, Canberra, A.C.T.; P. Colchitas, Sigma Co. Ltd., Melbourne, Victoria; R. Anderson, Department of Pharmacy, Adelaide University.

A list was then circulated for signatures of foundation members, to which it was agreed the names of those people who had expressed previous interest in correspondence should be added. Professor Wright announced that a meeting would probably be called just prior to or following the next A.N.Z.A.A.S. meeting in Sydney during August 1962.

CONSTITUTION

THE AUSTRALIAN PHARMACEUTICAL SCIENCE ASSOCIATION

Name: The name shall be the Australian Pharmaceutical Science Association.

Objects: The objects are for the advancement of Pharmaceutical Science.

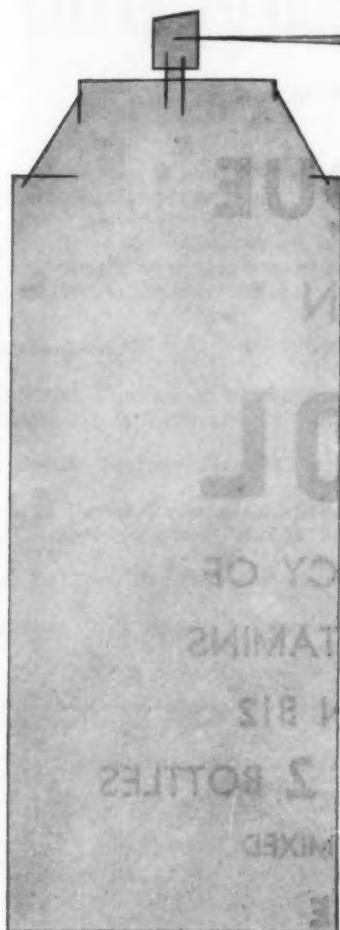
Membership: Membership shall consist of (1) Foundation members of the Association, (2) Any person interested in Pharmaceutical Science nominated by two members of the Association and approved by the Council. Members shall pay an annual subscription of one pound or such other sum as determined by a General Meeting.

Council: The Association shall have a Secretary and Treasurer, called its officers. These and five additional members shall constitute a Council for conducting the Association's business in conformity with its by-laws. The quorum at any meeting of Council shall be five of officers and members present. The Council shall have power to make rules for the conduct of its business, and shall also have the right to fill any casual vacancies or to co-opt further members. All offices of the Association shall be honorary.

Elections: All financial members of the Association shall have the right to vote for the officers. At least three States should be represented on the Council provided three members offer, and for the purpose of this ruling the A.C.T. is to be considered as a State. Officers and other members of Council shall be elected by a postal vote, to take place in May or June each year, so that the new Council be in a position to assume office on or about July 1.

The members of Council shall retire each year, but shall be eligible for re-election for a second annual term, after which they shall be ineligible for re-election until a further period of one year shall have elapsed. The Secretary and Treasurer shall retire each year, but shall continue to be eligible for re-election until they have had five years' continuous tenure of office, after

(Continued on p. 720)



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Mr. W. Wilson, c/o Burroughs Wellcome, Sydney, Treasurer.

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Victoria: Mr. H. Barker, Victorian College of Pharmacy, Melbourne.
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(Continued from p. 718)
which they shall be ineligible for re-election until a further period of one year shall have elapsed.

Finance and Property: The Association's funds shall be deposited in a bank account on behalf and in the name of the Association, but the Treasurer shall be responsible for, and keep proper accounts of, all moneys due to or payable by the Association. Accounts of the Association shall be audited as directed by the Council. All payments shall require authorisation by Council, and cheques shall be signed by at least two of its officers or members. Where possible the funds of the Association shall be invested on the advice of Council, in the names of two or more Trustees, who shall hold the investments (and the income available for reinvestment) to the use and benefit of the Association and in accordance with the terms expressed and contained in a declaration of trust approved by Council and executed by the Trustees. Real or personal property (excluding funds) contributed to or acquired for and on behalf of the Association shall vest in two or more Trustees appointed by Council and who may be the officers of the Association or any other members. In case of dissolution any remaining assets or surplus of the Association shall not be distributed amongst the members, but shall be applied, as nearly as possible, to the support of the study of Pharmacy.

General Meeting: There shall be a General Meeting held at the time of each A.N.Z.A.A.S. Conference and at such other times as may be decided by the Council. The General Meeting shall:

- (a) receive a report from Council on the activities since the previous General Meeting;
- (b) receive an audited statement of income and expenditure and a balance sheet;
- (c) modify or amend the Association's by-laws, provided three weeks' notice is given of the proposed amendment; and
- (d) conduct any other business raised by members. The quorum for the General Meeting shall be 20, and all questions shall be decided by simple majority.

Classified Advertisements

The charge for these Advertisements is 5/- per line, with a minimum of 15/-, payable in advance.

Mrs. G. HEATHERILL: P.B.A. AND P.M.S. SCRIPTS priced at 32/6 per hundred, 48 hours service. All claims given prompt attention and submitted for payment. 23 Page Ave., Garden City, S.C.7. MJ 2102.

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Our Young Pharmacist and His Future

By H. A. Braithwaite, F.P.S.

Lecture No. 1 of a series of lectures on pharmaceutical merchandising sponsored by Vick Products Pty. Ltd.
delivered at the Victorian College of Pharmacy, 17.7.61

This is the title of the lecture as it was given to me, and it could be used to predict what lies ahead of our young colleagues. But I have chosen rather, firstly to give some advice to our students and our young graduates.

What the Pharmacy Student should get from his College Course.

Our students, we know, will learn something of Chemistry, Physics and Biology in their first year. This is the same sort of pre-course training as given in all science callings. Later something of Pharmaceutical Chemistry, Pharmaceutics and Pharmacognosy. And in their final year some more Pharmaceutical Chemistry, Applied Pharmaceutics, together with Forensic Pharmacy and Pharmaceutical Organisation.

By now they will have proved by examinations that they have learnt something of these subjects, but the everyday application of their knowledge is the vital thing for them to get from their Pharmacy Course.

If they have gained this general knowledge of the application of Chemistry, and the other subjects of the course, they will be able to give useful advice about such things as preservatives (for example, answer the query, Would it be all right to put an aspirin tablet to a cupful of passion fruit juice?) or say with certainty you cannot remove iron mould from a coloured fabric without taking out the colour, or could they give reliable emergency advice about antidotes?

What the Pharmacy Trainee should look for from his Traineeship.

You all will know that the Pharmacy Board is planning that some of the statutory hours of experience should be served by our pharmacy trainees in retail pharmacy. I believe it is worthwhile for us all to understand the reasons for this planning.

Firstly, the realism that exists when the preparations handled are supplied to actual users of the products brings home that we have an immediate responsibility about the quality, quantity and suitability of each preparation as well as a responsibility about safe custody and potential effectiveness.

During this traineeship students should learn from repeating frequently some of their student exercises. They should also learn that there are some things that you do not sell although the law does not forbid the sale. These may be as simple as Saltpetre to the bright young boy or Fellow's Syrup to the person with a very high blood pressure. They will also learn to appreciate the use of antidote labels, special containers, and of the warning to the user that comes from the use of a "Poisons Sales Book."

After this period, our trainees will appear before members of the Pharmacy Board who will decide whether the trainees are safe to register. This is a responsibility of the Pharmacy Board that goes beyond the candidate's academic ability, and it is worth knowing that successive State Governments have been satisfied to have the Pharmacy Board handle this responsibility in this way.

The value of the Newly Qualified to his Employer and to Pharmacy.

Because of shortages of qualified personnel in many

callings this aspect of our affairs has lost its proper share of consideration; but I believe that those newly qualified who do think of this period of their professional lives will gain a lot for themselves. For after a few weeks, learning the routine of the establishment where they are working, they can usually handle as much regular dispensing as older pharmacists. They should avoid counter prescribing except for the simplest of complaints that have only been a problem to the patient for a short time. And I believe that it is better for them to suggest some packed line and give special directions rather than compound something. Their special contributions can come from their knowledge of new techniques, doses of modern drugs, but more especially from what they have learnt of Biochemistry and Pharmacology.

And at this time of their lives, those young pharmacists who have become appreciative of discipline will be ready to appreciate the administration needed in business. If their understanding of discipline comes from having been a school prefect, cadet officer, scout master, or the like, they should soon learn to control junior and unqualified staff, although they themselves may be younger.

Ethics — Responsibilities — Privileges

I believe that all graduates from any course of training, whether they have received diplomas, degrees or some form of registration, are required by our democratic community to assume civic responsibilities in keeping with their status. For example, in the case of an accident or poisoning, in the absence of a medical practitioner a chemist must act in keeping with his qualifications.

And in regard to Ethics, I believe that the simplest guide to us all—even after looking at the Code of Ethics—is if anything is legal and is the customary practice of the profession, it is ethical. In the near future I hope our Society's Code of Ethics will be set out afresh and in such a way that an offender can be dealt with by the Pharmacy Board and not as at present just risk losing his Society membership. These community responsibilities bring privileges, and most of them are not tangible—one is exemption from jury service—but the important one is the exclusive right to supply Dangerous Drugs and Prescription Only Drugs to the actual consumer.

Goodwill of Colleagues, Medical Practitioners and Members of Other Professions.

Attainment of this goodwill is not difficult if you realise that the community has accepted you as a specialist, and you always talk and act within the field of your qualification. By being positive in your statements and avoiding knocking other practitioners even by implication, plus reasonable co-operation with your pharmaceutical colleagues, you can achieve a satisfying amount of goodwill.

Pharmacy Board and its staff, Drug Trade Houses and their staff, Health Department Officials and Inspectors generally.

All these bodies and their staffs have certain work to do—some to administer the law for the people generally, others to promote profits for their shareholders. Now

all these and many others have an accepted place in our democracy, and I know if you meet them graciously and openly you will develop a goodwill that over the years will pay you dividends.

Predictions for the future

Now I am prepared to offer some predictions about the future of Pharmacy's new graduates.

Firstly I believe that in our growing community there will always be plenty of well paid positions and plenty of opportunities for them.

There is certain to be a growing demand by bigger pharmacies for capable registered assistants and for managers of their dispensing departments.

Those young graduates with specialised knowledge or attributes, and especially those with some additional suitable qualification, will be sought after for the technical sections of chemical and drug firms and food processing firms. Commonwealth Health Department, Repatriation Department, our general hospitals, as well as the Armed Services, will be seeking them for technical and administrative work.

In pharmaceutical work I believe they can expect to be called or to use all day and every day their technical and professional knowledge. I also believe they will find it necessary to continue to study or read of the advances in drug therapy and modes of administration of medicaments, because these are likely to change rapidly and radically.

In retail pharmacy they may see more of our work covered by Government Social Services. This factor together with the growing costs of doing business and the need to carry a large stock of expensive modern drugs is likely to make it difficult for the smaller—that is the one man pharmacy.

On the other hand, our growing population and especially the concentration in our main cities is likely to prove advantageous to our bigger pharmacies.

And if I am right in these predictions, our young graduates will be able to practise pharmacy profitably and with satisfaction; but perhaps may not be able to become proprietors of businesses quite as early in life as some did in the past.

In retail pharmacy I believe bigger pharmacies will be using more self-serve lay-outs with "poisons" linked to a prescription reception counter. This may mean only one qualified person in the front of the pharmacy and other pharmacists in the dispensary. But even there we may expect to find prescription clerks recording and pricing prescriptions.

And finally, one thing I hope for is that some of the younger pharmacists will become interested in teaching, and another hope is that we will soon see some of them coming forward to positions as members of our Council, the Pharmacy Board, Guild, S.B.C., etc.

INCOMPATIBLE SUBSTANCES

At a recent conference in South Africa the following resolution was passed:—

"This 16th Annual General Meeting of the P.S.S.A. requests the manufacturers of proprietary medicines to publish information regarding any incompatibilities between their preparations and drugs in common use."

The mover pointed out that certain prescriptions issued by medical practitioners are for admixtures of ethicals and galenicals. The observation of colour changes in these mixtures and also the formation of sediment often cause the pharmacist to feel apprehensive about the possibility of some incompatibility in the substances forming the mixture. He thought it necessary that full information should be made available regarding incompatibilities in possible mixtures.

The resolution was unanimously adopted.

FORENSIC PHARMACY

While it is true that no citizen can avoid contact with certain aspects of the law, there can be few more closely concerned with legislation than the pharmacist in retail practice. There are not many transactions in the daily round that are not governed, at some point or in some way, by one of the many aspects of law and legal procedure. It may be a request for a simple 4 lb. of bicarbonate of soda, but what is supplied must be bicarbonate of soda according to a definite standard—or somebody may want to know why! If the quantity falls short of the requested weight, some other body, with a special interest in that direction, may exhibit considerable interest. Alternatively, a more than obliging customer may want his ammonia in a sauce-bottle—"It doesn't matter, I am just going to use it"—or, having been convinced that another sort of bottle is not only desirable, but obligatory, he then expresses his conviction that a label is unnecessary, for he is going to use it all, and none will be left over. (The number of such agents provocateurs in the course of one day is almost beyond belief.) There is the other customer—frequently a plumber—who hands over a whisky bottle for spirit of salt. He always keeps it in that bottle, he tells you, and it is difficult to persuade him into accepting (and paying for) a container that has to satisfy both the pharmacist and the law. Whereupon, to the imminent hazard of your linoleum, he transfers the acid to his own bottle, handing back the legal one before leaving the shop! Mr. C. C. Stevens, pharmacist and barrister, who recently addressed the Plymouth Branch of the Pharmaceutical Society (p. 472), will have met such diverting and time-and-tempo-consuming occurrences as those mentioned. The determination of some people to resist what is frequently regarded as an attempt to sell a poison bottle is worthy of a better cause.

The Student

Mr. Stevens, in his address, quoted the remarks of the Privy Councillor on the recent examinations of the Pharmaceutical Society on the subject of forensic pharmacy. He complained that the subject was treated by the majority of candidates as a sort of "memory marathon," and that the students showed that they were muddled in their accounts of the keeping of records, the restrictions on sale, and the requirements in labelling. I am not surprised that such weakness should be shown, for there is no way of teaching the subject in college that could overcome the necessity for an exercise of memory. I belong to a generation which learned that registers were real books that were subjected to periodical inspection. It was therefore necessary to keep such records with meticulous care, for an inspector might visit the pharmacy at any moment. Failure to make the correct entry at the appropriate time could result in something more serious than the loss of marks at an examination. The labelling requirements were learned in to day-to-day work as the problem arose, and prescriptions, covered by then admittedly less complex regulations, were studied with the same care as cheques were scrutinised by the bank. Such work was undertaken daily for a space of three or four years, and it was practical training. We shall never again see that kind of training in pharmacy, but there may be a strong argument for examining the student in forensic pharmacy after he has had his present practical training. In my experience there is nothing the newly-qualified pharmacist knows less about—"Xrayser," in "The Chemist and Druggist."

● Do you realise that the sale of a single roll of Kodacolor film (when returned to you for processing and prints) gives you more profit than the sale of a low-priced camera?

And that's not the whole story, either. Introduce your customers to the thrill of seeing their snapshots in full colour and watch your repeat business grow and grow.

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Round Labels: From $\frac{3}{8}$ " to $4\frac{1}{2}$ " diameter
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Quick change attachments can be added at any time to the same basic machine to make it a fully automatic labelling unit and increase its output.

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INCREASE SCOPE AND LIFT OUTPUT
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1. Copy books, carton blanks, flat bags, etc.
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5. Round objects with part-around and full wrap-around labels and angular objects with face labels or 3-sided labels.
6. Odd-shaped bottles and similar containers.
7. Rectangular objects, when simultaneous labelling of two or more articles at a time will multiply the output.
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by

Geoff K. Treleaven,
Ph.C., F.P.S.

PHARMACEUTICS DEPARTMENT,
VICTORIAN COLLEGE
OF PHARMACY

A New Anti-neoplastic Cytotoxic Agent

VINBLASTINE

Vinblastine sulphate (formerly vincaleukoblastine; VLB) is an alkaloid extracted from *Vinca rosea* Linn., a common flowering herb better known as the periwinkle.

History: The periwinkle has had the reputation in many parts of the world of being a homely remedy for various complaints. The natives of Jamaica have been reported to drink periwinkle tea for diabetes mellitus. Subsequent investigation showed no hypoglycaemic activity, but leukopenia in experimental animals was observed.

Chemistry: Chemical and physical evidence indicates that Vinblastine has the empirical formula $C_{22}H_{20}O_4N_2$, and that it is a member of a new class of dimeric alkaloids containing both indole and dihydroindole moieties. The exact structural formula remains to be determined.

Vinblastine represents a new class of oncolytic drug which has been found particularly useful in generalised Hodgkin's disease and choriocarcinoma resistant to other available therapy.

Action: The exact mode of action of Vinblastine is still not determined, but there is some evidence that the drug has an antimetabolic action, probably connected with cellular glutamic acid utilisation. It has also been demonstrated that treatment of neoplastic cells with Vinblastine in vitro has resulted in arrest of their division at the stage of metaphase.

Uses: Vinblastine has been used for the palliative treatment of some malignant neoplastic conditions, but there is no evidence that it has in any instance cured human cancer. In susceptible cases, Vinblastine has produced temporary reduction in the size or temporary disappearance of some tumors, relieved pain and other symptoms, and allowed some patients to regain appetite and weight. Such periods of remission have varied from patient to patient.

Proprietary Preparation: VELBE (Overseas Velban)—(Lilly) Ampoules 10 mg., 10 c.c.

(Full information regarding dosage, etc., of Velbe is included in the latest "P.P. Guide" Supplements.)

The Women's Section

Correspondent: Miss A. K. Anderson

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF VICTORIA

Our Association does not hold a general meeting in July, but we are hoping for a good attendance at our August meeting, when the guest speaker will be Miss S. Irvine to talk about Red Cross.

Interstate delegates at the conferences will be interested to hear of the marriage recently of our Vice-President, Miss Irene Maskell, to a fellow pharmacist, Mr. Eric Boyce. On June 26 Committee members entertained Mrs. Boyce at dinner to congratulate her on her marriage and wish her well. Arranged by Mrs. Harkins, we all enjoyed a delightful party at the Lyceum Club, where the President, Miss Grace Donaldson, greeted members, and during coffee presented Mrs. Boyce with a wedding gift from our Association.

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF SOUTH AUSTRALIA

A pleasing number of members, associate members and guests attended our meeting on June 15 in the Lady Symon Lounge of the University of Adelaide.

The President, Mrs. D. M. Maloney, opened proceedings at 7.45 p.m., and a short business meeting preceded the arrival of our guest speaker, Mrs. B. Wellington. Mrs. Maloney welcomed Mrs. Wellington, who gave us a very interesting talk on skin care and make-up, emphasising the importance of a clean, healthy skin, and leaning to the "natural look" in make-up. She concluded her talk by asking for a volunteer to act as a model for a demonstration make-up, and our Secretary, Mrs. E. Wilkins, was chosen. We had asked for some pointers on eye make-up, so Mrs. Wellington concentrated on this aspect.

The President called on Mrs. H. Morrow to thank Mrs. Wellington on our behalf, and at the close of the meeting members adjourned to the George Murray Lounge for coffee.

WEST AUSTRALIAN WOMEN PHARMACISTS' ASSOCIATION

We were pleased to greet our President, Miss E. R. B. Harris, on her return from Melbourne and Canberra. She looks well despite her indisposition in Melbourne.

On June 15 our President entertained and welcomed first year apprentices at a buffet tea at Leonardi's. About 40 members were present, and a very happy evening ensued.

Mrs. Caddy's many friends will be pleased that she is enjoying her overseas holiday. She will be absent for 12 months—just left Rome, preparing for a holiday in Spain, and hopes to have a "white Christmas" in England.

Federation Dinner, Thursday, August 17, will be at

the Palace Hotel. As this is the 25th year (Silver Jubilee) of our Association, the Committee are working hard to make this a memorable occasion, and hope all members will be present.

Mrs. Lucraft has decided to live in Albany. She is a life member, and her help and bright personality are missed. However, she will be coming to the dinner.

ASSOCIATION OF WOMEN PHARMACEUTICAL CHEMISTS OF N.S.W.

A large gathering of members and friends met on July 12 at 8 p.m. at the Nurses' Memorial Club, 18 College Street, Sydney.

The President, Miss I. J. Latham, conducted a preliminary business meeting, and reported that she and the Secretary, Miss E. Tasker, had attended the June meeting of the National Council of Women, where new members are being sought.

Our evening's guest speaker, Dr. Bowman, was then introduced by Miss Latham. Dr. Bowman addressed the meeting on the subject of "The Inhibition of Ovulation and Other Uses of the Progestins."

At the conclusion of the address and question time Mrs. Sperling proposed a vote of thanks, which was carried by acclamation. Dr. Bowman was then entertained at supper.

PHARMACY EXAMINATIONS IN NEW ZEALAND

Extracts from the Annual Report of the Pharmacy Board of New Zealand for the year 1960 are published in the May issue of "The Pharmaceutical Journal of New Zealand." Among these extracts is one relating to the examinations. From this we publish the following particulars which, in view of recent discussions in Australia, are of some interest.

"The examiner in chemistry, Professor S. N. Slater, in his report to the Board, stated, inter alia, 'of 240 candidates sitting, 105 (i.e., 44 per cent.) secured passes, compared with 56 per cent. in 1958. This fall in percentage passing is quite marked and gives rise to questions of scaling. I am satisfied, however, that to raise the marks as a whole by such a method would in fact pass many students who would be quite unprepared for more advanced studies. I am satisfied, in fact, that there was a lowered general standard of preparation of the candidates this year. At the same time, some of the candidates who passed showed the same gratifying high quality that I have commented on in the past.'

"The obvious corollary to this comment, of course, is that the students must be encouraged to devote more time and concentration to their studies if they are to achieve success in the examinations. The position will become more critical in the next year or so, for the time available to complete the Board's examinations under the old syllabus must be limited."



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When the stock from his bargain buys
heaped up in his cellar, he added a
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When he realized how many invoices were
being sent by his many suppliers, he got
a bookkeeper's green eyeshade.

When he noticed that his capital was tied
up in inventory, he decided he was acting
as his own banker and bought an
expensive Homburg.

Each hat seemed a logical development
at the time of acquisition. It was only after
he had paid for them all that he remembered
he had only one head.

Moral

The Lilly policy of distribution recognizes a pharmacist's professional standing. It substitutes one phone call to a Lilly service wholesaler for the other three hats. This call brings fast-moving, profit-assured items that don't languish on shelves and tie up working capital.

If you think you are wearing too many hats, improve your fiscal appearance by routing your orders through one of the 40 Lilly service wholesalers who serve the nation.

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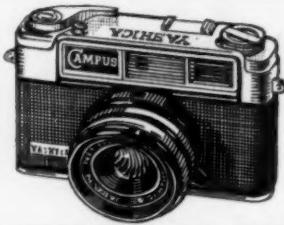
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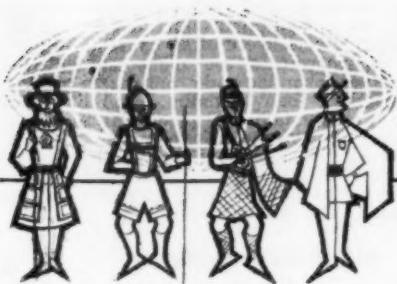
AT LAST! Yashica 8P Projector. With excellent mechanical features and remarkable ease in operation. Features include YASHINON f1.4 20 mm. lens; variable resistor speed control from 8-24 f.p.s.—400 ft. rewind in 15 seconds. Silent-running. Takes Yashicascope lens.

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overseas news

GREAT BRITAIN

London, July 10, 1961.

Improved Terms Asked

As indicated briefly in last month's News Letter, a Conference of Pharmaceutical Committees had been convened to consider the growing dissatisfaction with the terms for the National Health Service dispensing. This Conference passed resolutions which touched on the foundation of the whole payment system. In the past, bargaining with the Ministry has often been in small fractions of 1d., e.g. the scale of dispensing fees is fixed to give a national average of 14.57d. per prescription, and the allowance for containers is 1.62d. The new claim is based on a reasonable return for professional services by means of a dispensing fee, and the claim is for this to be raised to an average of 2/- per prescription. The allowance for containers should be 2d. per prescription, to permit of appropriate containers being used for tablets without financial loss to the contractor. Fees for "urgent" prescriptions dispensed when premises are closed have always been considered inadequate, and the claim is now going forward for 10/6 per prescription for those dispensed after 11 p.m. and for 3/6 for those between the normal closing hour and 11 p.m. Since the Service began in 1948, rota duties have been paid at the rate of 7/- per hour on week days and 12/6 on Sundays, and only one hour's duty is paid. Contractors now ask that this should be increased to the more realistic figure of 15/- on week days and £1/10/- for Sundays. It is expected that some months will elapse before a final decision is reached on the claim, but it seems certain that the cooperative attitude of chemists during the past 13 years will not continue unless there is a change of outlook by the Ministry.

Meeting with the Minister

Representatives of the Central Contractors' Committee, accompanied by Mr. F. W. Adams, Secretary and Registrar of the Pharmaceutical Society, met the Minister of Health at the end of June to discuss the 2/- levy on prescriptions. The Minister has made statements in the House of Commons on what the chemist should do if he received a prescription for articles or drugs valued under 2/-, and his statement, together with suggestions in the less responsible Sunday newspapers that chemists were over-charging, have caused great resentment among contractors. The Minister told the deputation that nothing he had said in the past, or would say in the future, should be regarded as altering, or seeking to alter in any way, the professional responsibility of the pharmacist. After a frank discussion on the professional aspect of the problem and the difficulties that arise in practice, the Minister agreed to reconsider the whole question in the light of what had been said, and to communicate with the Central Contractors' Committee.

The Central Contractors' Committee have also met senior officials of the Ministry with reference to the claim for increased remuneration. The representatives were unwilling to enter into any discussions which would lead to a further case being proved in detail. Some questions have now been sent from the Ministry to elucidate the claim. Mr. J. Wright, F.P.S., has become Secretary to the Central Contractors' Committee, and is at present acting Secretary of the National Pharmaceutical Union in the absence of Mr. H. Noble.

A Ministry View

The 2/- levy has again been under fire in the House of Commons, and in the course of the Government's reply by Miss Edith Pitt, Parliamentary Secretary to the Ministry of Health, official view on the doctor-patient relationship was put forward. She said, "I can see nothing wrong in a discussion between a doctor and his patient about the number of items, or about the quantities on a prescription, and hence the frequency with which the patient will have to pay a prescription charge. On the question of the doctor-chemist relationship, one of the professional principles of pharmacists is that they must not discuss prescriptions with patients in such a way as to impair the patient's confidence in his doctor. It has long been agreed that if a patient asked whether he can do without a particular item, or about its value in treatment, the chemist should ask him to discuss that with his own doctor. There is no reason why information about the price of a drug or dressing should undermine confidence in the doctor. The value of a medicament should not be judged by its price. Some low-priced drugs are among the most valuable."

Fewer Drug Addicts

The known drug addicts in the United Kingdom fell to 437 in 1960, or 17 fewer than in the previous year. In 1960, 98 addicts were added to the Register, compared with 130 previously. Morphine is responsible for the greatest addiction, amounting to approximately one-third of all known addicts.

Society's New Officers

For the first time since 1927 a hospital pharmacist has become President of the Pharmaceutical Society. Mr. H. S. Grainger was appointed to this position at the June meeting of the Council. Mr. Grainger is a pharmacist at the Westminster Hospital, and has been prominent in hospital pharmacists' activities for over 20 years. Mr. Grainger is succeeded as Vice-President by Miss M. A. Burr, who is only the second woman to achieve this distinction. Miss Burr is in retail business in the Midlands. Past-President Mr. W. Spencer Howells has been appointed Treasurer for the 14th time, a record for the present century.

Hospital Pharmacists

The cessation of out-patient dispensing at St. Thomas's Hospital, as mentioned in last month's Comments, has had repercussions in both Houses of Parliament. In the House of Lords, the increased cost to the Exchequer was mentioned, and the Government asked what steps were being taken to improve the recruitment of hospital pharmacists. Lord Newton, for the Government, said that only a small minority of out-patient prescriptions were dispensed by retail pharmacists. Some 188 hospital authorities normally used this method, and in many cases only for child guidance or evening clinics. In all, about 700,000 prescription forms were used by hospital authorities. The salary range for pharmacists was from £690 to £1560 per year, and a claim had been put in for increases ranging from 14 to 42 per cent.

The claim which has gone in asked for a basic grade for salaries of £800 to £1050 at one end of the scale, and for £1600 to £2050 at the other for chief pharmacists in the largest hospitals.

Sir Hugh Linstead, in the House of Commons, asked for information on the number of pharmacists employed in hospitals since the Service began. The answer showed figures ranging from 1127 in 1949 to 1444 in 1960. These are based on full-time equivalents. Probably many more pharmacists are, in fact, employed, as a number of married women work part of the week only.

Dangerous Drugs in Hospitals

The Ministry of Health is taking steps to standardise the procedure on the control of dangerous drugs in hospitals, and special order and record books for ward sisters have been prepared. The Ministry state that it is important that nursing staff who move about from hospital to hospital should have the same type of drug books wherever they go. It is emphasised that the security of the books is of great importance, and they should be kept locked up. Special arrangements should be made for the delivery of dangerous drugs to wards, and the messenger who conveys the drugs from the pharmaceutical department must be aware of his responsibility. It is emphasised that the sister is responsible for balancing her stocks of dangerous drugs against the outgoings, and should report any apparent discrepancy. The pharmacist should be consulted to see if he could confirm the suspicion of loss, and if there were no satisfactory answer the matter should be reported to a senior officer. It is recommended that where part of the contents of a container of drugs is unwanted, it should be returned to the pharmaceutical department. If the returned stock is unsuitable for use, it should be destroyed in the pharmaceutical department in the presence of a witness, and the appropriate entries made in the Dangerous Drug Record book.

The Modern Student

The reports of the two Boards of Examiners of the Pharmaceutical Society in Great Britain for 1960 have been published recently, and shed some interesting lights on the modern educational programme, perhaps reflecting in some ways the absence of the old-fashioned apprenticeship in practical pharmaceutics. It was found that simple mixing operations were often badly done; for example, ointments containing zinc oxide and ichthammol. The presentation of products left much to be desired, and in particular the necessary details were often omitted from the labels for injectable products. These comments were included in the report for England and Wales on students who were undertaking the two-year course. For those who were taking a three-year training, there seemed to be evidence that crowded time-table had resulted in a better understanding of the principles involved. The report of both the English and the Scottish Boards comment on the poor answers in the questions on labelling. Practical and pharmaceutical chemistry appears to present difficulties to many

candidates, and failure to carry out quantitative work in duplicate, and poor allocation of time between qualitative and quantitative work were often causes of failure. In theoretical pharmaceutics too many students attempted to reproduce formulae and graphs from memory without understanding their meaning. Too little emphasis was placed on fundamental principles, and often there was a failure to appreciate the more important part of a subject, e.g., in an answer to a question asking for the preparation of antibiotics most candidates could give detailed descriptions of bleeding the horse, but few knew how to purify the crude serum.

Still Better Penicillins

The development of penicillins which will revolutionise the antibiotic treatment of disease is forecast in the annual report of the Beecham Group. The Chairman, Mr. H. G. Lazell, informs the shareholders that several new penicillins developed from modifications of the nucleus are at present undergoing the final stages of evaluation. Already the Beecham Group markets Broxil and Celbenin. Mr. Lazell also has a word to say on the growing attacks on the pharmaceutical industry: "The main accusation is that the industry is making excessive profit which materially increases the cost of the Health Service. In comparison with an expenditure of £1000 million on alcoholic drinks and of over £1100 million on tobacco, a cost of approximately £740 million for the whole National Health Service does not seem to be an excessive charge on our national resources." The primary factor governing the drug pricing policy, in Mr. Lazell's opinion, was the need to make adequate provision for research. From one successful product, hundreds were tested and rejected—indeed this has been the case with penicillin. If the industry was to have a sound financial basis, it must be allowed to recover the research expenditure from the very few marketable products which emerged. Mr. Lazell's statement has received wide publicity, including the B.B.C. Radio News Service.

Another Industrialist's View

The views of the pharmaceutical industry on the Drug Bill were also put succinctly by Mr. W. R. Norman, in his first statement as Chairman of Boots Pure Drug Co. Ltd. He pointed out that the "drug bill" is said to be rising all the time, and first the patients are accused of excessive demands and the doctors of excessive prescribing; then the retail chemist is accused of making excessive profits, and the manufacturer of charging excessive prices. But the statement that the national drug bill is an increasing burden is not true. The Board of Trade wholesale price index records that "pharmaceutical preparations" rose 0.9 per cent. between 1954 and 1960, whilst over the same six years "all manufacturers' products" rose 13.1 per cent.—14 times as much. It is difficult to escape the conclusion that the continual attacks made on the size of the "drug bill" are inspired more by ignorance than by the merits of the case. There is in fact very close control over the cost of the pharmaceutical services, and the chemist cannot charge what he likes, but is only paid an amount allowed by the Ministry. Any suggestion that great profits can be derived from supplying drugs to the National Health Service is wide of the mark. The Government is getting the business done not only efficiently and economically, but at a lower cost than would be possible in any other way.

Chemicals in Food

The use of chemicals in foods has been criticised in the House of Lords, and special committees are reviewing solvents and flavouring agents, while colouring matters will be examined at a later date. Lord Douglas of Barloch wanted to see the use of synthetic chemicals completely banned, or only a short list of substances

(Continued on page 776)



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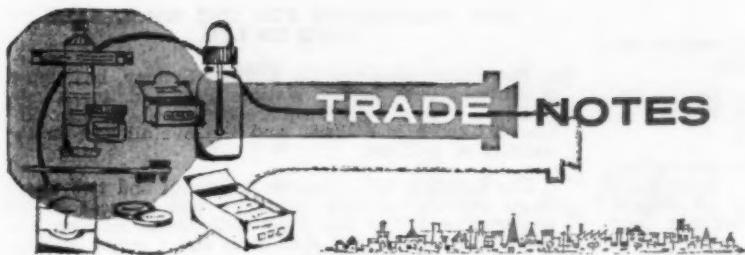
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SOLID ADVERTISING SUPPORT BRINGS RECORD RESULTS

This has been a bumper year for Dexsal. Why? Because chemists who featured Dexsal in windows and on counters were backed up by both press and radio advertising. Big advertisements appeared regularly in metropolitan newspapers, and no less than 42 radio stations carried Dexsal advertising, too. Sell and recommend Dexsal — it's a 'chemists only' line that always is well backed by strong and consistent advertising support.



A 'chemists only'
line worthy of
your very special
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BICILLIN

Wyeth Pharmaceutical Pty. Ltd. has announced that when present stocks of Bicillin All Purpose are exhausted, a new combination pack of Bicillin A.P. with Diluent will be available. The Department of Health will continue to pass for payment prescriptions for the old pack. The new pack will also be available as a National Health Benefit. The price to chemists is 84/- per dozen.

"SKEFRON"

Early in August, Smith Kline & French Laboratories (Aust.) Ltd. will introduce to the medical profession an entirely new product, "Skefron."

"Skefron" is for the relief of pain. It is a cold spray which is applied to the skin to achieve rapid cold chilling. "Skefron" is stated to be of especial value in conditions caused by spasm of skeletal or plain muscle.

A booklet giving more details is available from Smith Kline & French Laboratories (Aust.) Ltd., Sydney.

"ERGALAN"-B

The British Drug Houses (Australia, Pty.) Ltd. announces the introduction of its new product "Ergalan"-B tablets, each tablet containing:

Ergotamine tartrate 1 mg.
Caffeine 100 mg.

This product is issued for the treatment of migraine and other headaches of a paroxysmal nature. "Ergalan"-B may be prescribed as Pharmaceutical Benefit No. 307.

List price for bottle of 50 tablets, 27/9.

M. & B.—REDUCED PRICES

May & Baker (Australia) Pty. Ltd. advises that prices for "Largactil" brand Chlorpromazine Hydrochloride, "Amphactil" brand Chlorpromazine/Dexamphetamine tablets and "Amargyll" brand Chlorpromazine/Amylo-barbitone tablets will be reduced on September 1, 1961.

In accordance with the company's usual practice, retail chemists will be allowed one month in which to dispose of current stocks at the old prices. The company will be invoicing at the new prices from August 1.

A pack of 100 x 100 mg. "Largactil" tablets has been added to the company's range at a price of 53/6 to the chemist, whilst the pack of 50 x 100 mg. tablets has been discontinued.

CHESEBROUGH-POND'S INTERNATIONAL LTD. P.C.D. PTY. LTD.

Mr. E. J. Austin, General Manager of Chesebrough-Pond's International Ltd., announced recently that, effective from July 1, 1961, P.C.D. Pty. Ltd., sole Australian distributor of "Vaseline" Brand Products, Pond's Beauty Aids, Cutex Preparations, relinquished trading operations, these functions thereafter being exercised by Chesebrough-Pond's International Ltd.

P.C.D. Pty. Ltd. has for some time been a subsidiary of Chesebrough-Pond's and the recent move is merely a combination of the manufacturing and marketing activities under the one banner in Australia.

Mr. L. Irving, previously of P.C.D. Pty. Ltd., assumes the responsibility of Marketing Manager of Chesebrough-Pond's International Ltd. Policies will remain identical, and all P.C.D. staff have been transferred to Chesebrough-Pond's in similar capacities.

NYAL EXPANSION IN VITAMIN MARKET

The Nyal Company has now released Nyal Biomin Vitamin Tonic and Nyal Biomin Children's Vitamin Tonic.

Nyal Biomin Tonic, both adult and children's dosage form, is stated to be a well balanced Vitamin B Complex formula containing B Group Vitamins, Iron and Trace Elements.

Nyal Biomin Tonic is supplied in an 8 fl. oz. "Nyal" bottle, and the Nyal Biomin Children's Tonic is supplied in a 6 fl. oz. size.

Both dosage forms are cartoned, the cartons (and the bottle labels) being printed in the same four colour design which won an Award of Merit at the National Packaging Exhibition for its sales appeal, consumer acceptance, design and printing quality.

Nyal Biomin Vitamin Tonic 8 fl. oz. is offered at 68/- list per dozen to retail at 8/6 each, whilst the Nyal Biomin Children's Vitamin Tonic 6 fl. oz. is offered at 54/- list per dozen to retail at 6/9 each.

"DISTAVAL"

The Distillers Company Biochemicals (Aust. Pty.) Ltd. announces that its non-barbiturate sedative and hypnotic "Distaval" is now available in a liquid form. The product, "Distaval" Suspension, contains 50 mg. thalidomide in each 5 ml. teaspoonful.

The notable property claimed for "Distaval" is that, while it is as effective as barbiturates, it is free from the untoward side-effects associated with their use. This, coupled with the tastelessness, makes the drug in the form of "Distaval" Suspension, which is pleasantly flavoured, particularly suitable for administration to children or the elderly.

Pack and price are as follows:—

Bottle of 60 ml. (approx. 2 fl. oz.) . . .	Retail 9/6	Trade 6/4
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"P.P. GUIDE"

Subscribers to the "P.P. Guide, 1961" will receive the next (third) supplement early in September.

They will notice an innovation that has been introduced, on the suggestion of Mr. Norman F. Keith, President of the Victorian Branch of the Guild.

New items and alterations included in future supplements will be identified by the placing of a large black dot against each new entry or alteration in all sections except the therapeutic index, which does not lend itself to being handled in this way.

Copies of the "P.P. Guide" are still available for chemists going into business for the first time, who will find its contents of inestimable practical help in their daily work. Copies may be ordered direct from the Journal Office, 4th Floor, "Guild House," 18-22 Saint Francis Street, Melbourne, or through any of the wholesale drug houses. Subscription is £7/17/6.

BOOTS PENICILLIN V. RANGE

Boots Pure Drug Co. (Aust.) Pty. Ltd. announces the availability of two additions to its range of Penicillin V. products.

Sus-Pen V (oral suspension of phenoxyethylpenicillin as the calcium salt), previously available only as a vanilla flavour, is now also available as a palatable banana flavoured suspension. The new pack is distinguished by the sub-title "Banana Flavour" and a bright yellow band around the carton and on the bottle face label. List price is 16/9, and it is available as N.H.S. Item 595.

An aid to convenience in the dispensing of Penicillin V. tablets is presented by Boots in the form of its new Dispensaid pack (illustrated). This is an attractive carton 7 in. x 7 in. x 2½ in. of distinctive design in the Boots colour scheme of blue and white.

The Dispensaid pack contains 500 Penicillin V. tablets coiled inside the carton and fed through a narrow slot at the bottom of the front (narrow) end. Dispensing is carried out merely by pulling on the foil strip protruding, counting the number of tablets required as they appear. Advantages of this system are—

1. Ease in dispensing.
2. No direct contact with Penicillin V., reducing sensitivity risks.
3. No loss due to tablet breakages.
4. Space taken up on a shelf is only 2½ in. wide.

Dispensaid packs are available as—

Stabillin-V (phenoxyethylpenicillin as the calcium salt)

125 mg. x 500 290/-
250 mg. x 500 552/6/-

N.H.S. Item 595

Tab-Pen VK (phenoxyethylpenicillin as the potassium salt)

125 mg. x 500 290/-
250 mg. x 500 552/6/-

N.H.S. Item 595

Chemists are requested to specify "Dispensaid" when ordering to ensure receiving this pack.



NEW WAREHOUSE FOR THE WHOLESALE DRUG CO. LTD.

The Wholesale Drug Co. Ltd., of Sydney, has signed a contract with James Wallace Pty. Ltd. for a new building of over 100,000 square feet at St. Peters. The contract price is £419,000 and the overall cost in the vicinity of £575,000.

The building will comprise a ground and two upper floors and the lift-slab technique will be used in the construction. The top floor will house modern air-conditioned offices and showroom and a major installation of I.B.M. data processing equipment.

The building is designed to allow for receipt of goods in the main entrance, Mitchell Road, and their storage and processing by gravity and modern conveyors through two floor levels to final despatch from Coulson Street at the rear.

Extensive mechanisation will be incorporated, and certain equipment planned will be used in the industry for the first time. The design is a result of study carried out in Europe, Canada and the United States, and a careful analysis of local operating requirements.

A further 25,000 square feet of area is available for expansion. The building is due for completion by May, 1962.

Architects for the building are Edwards, Madigan & Torzillo. Structural engineers are P. R. Miller, Milton & Ferris, and consulting engineers are Kuttner, Collins, Bligh & Partners.

P.A.T.A. OF N.S.W.

Notified 6-7-61:—

Chemists' Section: Addition

Size	Retail	Wholesale
		Smith Kline & French Laboratories (Aust.) Ltd.: 5 fl. oz. 17/-
		Skefron 136/- doz.

Alterations: General Section

Fisher & Co.:		
Small 2/6	Fisher's Teething Powders	22/6 doz.
Large 6/-	Fisher's Teething Powders	54/- doz.
	National Chemical Products Pty. Ltd.:	
6 oz. 7/6	Napro Sylkare	48/- doz.
King-size —	Napro Dual Action Shampoo, Manufacture Discontinued.	

Notified 17/7/61:—

Chemists' Section: Addition

Size	Retail	Wholesale
1 x 6 97/6 Amps	H. F. Harvey Pty. Ltd.: Snapoules (Royal Jelly) 50 mgm./cc.	65/- ea.

Chemists' Section: Alterations

Ansell Distributors (N.S.W.) Pty. Ltd.:		
5/6 Steadiflow Pyrex Feeder	40/7 doz.	
5/6 Steadiflow Plastic Feeder	40/7 doz.	

Retail prices to come into force September 4.

Wholesale prices to come into force forthwith.

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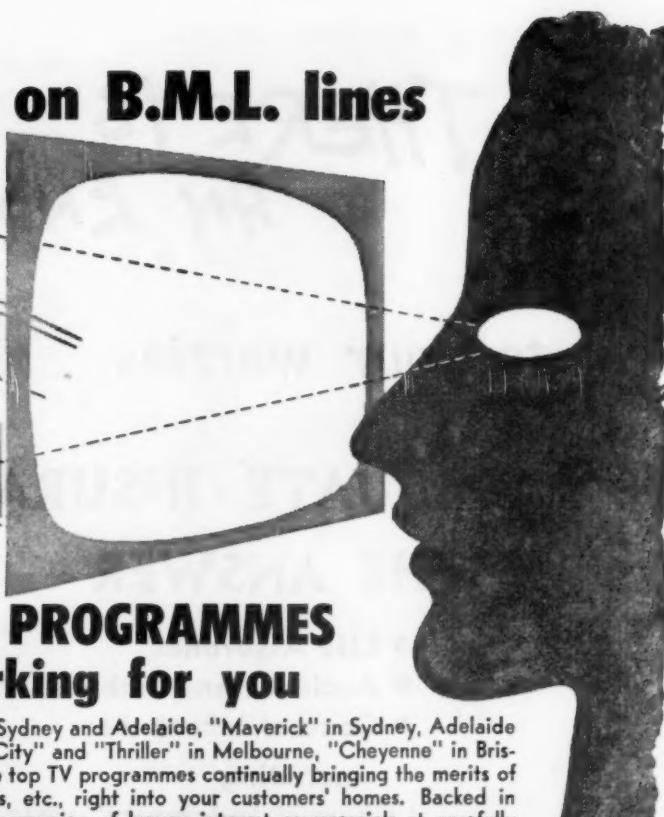
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"77 Sunset Strip" in Sydney and Adelaide, "Maverick" in Sydney, Adelaide and Perth. "Naked City" and "Thriller" in Melbourne, "Cheyenne" in Brisbane are some of the top TV programmes continually bringing the merits of Ford Pills, Menthoids, etc., right into your customers' homes. Backed in addition by a solid campaign of human interest commercials at carefully selected times, B.M.L.'s BIG TV CAMPAIGN is specially planned to secure for you the utmost in consumer interest and the maximum in sales results.

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7½% EXTRA DISCOUNT waiting for you on parcels over £10 in value.

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PLUS the regular cash or 30 days' discount allowed by your wholesaler.

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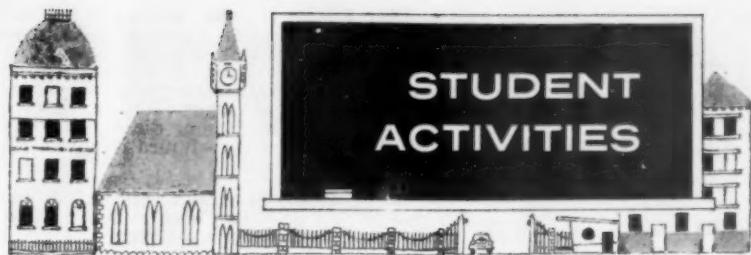
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SYDNEY UNIVERSITY PHARMACEUTICAL ASSOCIATION

S.U.P.A. has been bristling with activity. Our Annual Car Trial was held on June 25, the course from Croydon Park to Burragorang Lookout. This was quite arduous, but 11 cars participated—ten turned up and one turned over (no bones broken) for the Bar B Q after. About 40 souls enjoyed the feast.

On June 22 we were entertained by a film night on Milton Antiseptic, and all who attended enjoyed this and the supper afterwards in the Common Room.

We have an entrant this year in the Miss University Quest sponsored by W.U.S. Our Miss Pharmacy is Isa Schroder, who has £109 to her credit—£60 odd of which she raised personally and the balance with help from friends. The award goes to the lass who raises the most money for World University Service, and we hope Isa fulfils this requirement, as she certainly does for Glamour!

On July 16 we have our Football Matches—three in all—Old Course v. New, Women v Men, and Mixed Soul Pats Team v. Mixed "The Rest."

Our Women's Sports have managed to reach the semi-finals in some matches. Congrats to all who have entered.

We are holding a "Roaring Twenties" Fancy Dress Ball on the last night of Second Term, and this promises to be a feast of fun for all. Financially successful too, we hope.

Mr. Bradbury, our President's father, has been very ill. Mr. Bradbury was a great help and a good friend to S.U.P.A. in helping to establish a "New King-size" Mortar. Best wishes from all are extended to him for a speedy recovery.

—Estelle de Boos-Smith, L.P.O.

VICTORIAN PHARMACEUTICAL STUDENTS' ASSOCIATION

Socially speaking, the end-of-term dance held in the College Hall on May 19 was an unqualified success—fun-wise and money-wise. Frank Johnson's band couldn't make it, so assorted Farrington-type musos led the music, while President Jim Whiting carefully blinded everyone with red and blue spotlights. (Nothing more flattering to a girl's complexion than a blue spotlight!)

The car trial seemed to be enjoyed by all present, as was the barbecue afterwards. The winning car, a Simca, was driven by Peter James (plus tartan beret) and navigated by Barrie Cathcart (mit black bowler).

At the first S.R.C. meeting two things of note occurred. The first was that John Christensen, last year's L.P.O., was elected Junior Vice-President of the Council. Congratulations, John. The other little items were the new furnishings in the S.R.C. and Executive rooms. The furniture is a delight, and one look at the President's new desk and fabulous chair tells who chose the stuff. Thanks very much, Jim (and your Committee), for your good taste, and congratulations on obtaining such comfortable chairs.

The annual football picnic was held at Ferny Creek on July 9. As usual, the event was an unqualified success. Two football matches were played during the day, but the girls' hockey match was called off due to the very wet and muddy condition of the field.

First Year played Second Year. Nobody really knows who won—the umpire was a buddy of one of the first yearites. The result was officially declared as a draw, although one S.R.C. member maintains that both sides should be disqualified on the ground that their warcries were unfit for general exhibition (they certainly weren't printable). Although there was some wind favouring one end, the other end was favoured very greatly by the slope of the land—it must be about 1 in 3.

Third Year had a full (and I mean full) team, but they very nobly played only half their men, because, due to lack of able-bodied fourth-yearites, we did not have even half a team. However, what Finals lacked in quantity they made up for in quality by proceeding to trounce Third Year most satisfactorily.

Associated with the barrels this year was a hot-dog stand which was advertised during the day (successfully) by some questionable-type comments from our best Soccer fan, John Pringle. Noticed that Pres. Jim Whiting worked hard all day pulling refreshments, as did demonstrator Mal Lee. Thank you for all your hard work, chaps, and for the use of the van, James. After the Barbecue a dance was held in the Hall—I believe it was greatly enjoyed by all present.

Plans are well in hand for the Annual Dinner to be held in the Wool Exchange Hotel on July 26. We will have as our guests our Honorary Life Members, Mr. Sissons, Dr. Stanton and Mr. Coe. Also present will be three new members of staff, Dr. Vaughan, Mr. Owen and Mrs. Rissom, and two well-known Melbourne personalities of which more will be told later.

The revue will be held for three nights, August 14, 15, 16, and rehearsals are well advanced, we are told.

The menu has been chosen for the Annual Ball to be held in the St. Kilda Town Hall on September 6. Let me assure everyone that the menu is mouth-watering in the extreme. Donations are beginning to arrive from various business houses, and orders for tickets have been

and are being received. It promises to be a very successful evening.

Clubs and Societies are in the news at College lately, with the formation of a Hiking Club, and prospects of others being formed very shortly. One of the most recent of the new club is a Squash Club, which will be very popular, if they ever get a court to play on.

—Judy Downey, L.P.O., Victoria.

ADELAIDE UNIVERSITY PHARMACEUTICAL STUDENTS' ASSOCIATION

Unfortunately this report has to leave the State too early for a report on the Annual Dinner to be written.

Since my last report there has been no great social function of consequence. From all reports received, it looks like the Annual Ball will net A.U.P.S.A. quite a handsome profit. This in itself speaks highly of the organising ability of our Committee.

Things have now started moving for the Annual Car Rally which always proves to be a riotous day for all.



A.U.P.S.A.: L. to R.—Helen Hall (Secretary). Peter Bayley (President).

With the Dinner being held this week, all attention is being focused on this event. Although the Dinner is as formal as possible, for the most part things usually start swinging after all the speeches have finished.

Our Committee is working this year towards a Faculty tie which is hoped to be released before the end of the year. A great idea, as it will help to distinguish Pharmacy within the University. The ties will be made available not only to students but to qualifieds as well.

—Mike Johnston, L.P.O.

TASMANIAN PHARMACEUTICAL STUDENTS' ASSOCIATION

Interest in the past two monthly meetings of the Students' Association has been considerably increased by programmes which have given us very enjoyable evenings.

At the June meeting, Mr. B. Shirrefs, a lecturer at the Technical College, showed us slides and gave us a light-hearted but informative resumé of his experiences during his recent trip to England and the Continent.

On July 7, after a short business session which was primarily to finalise arrangements on future social activities, we saw films kindly lent to us by Johnson & Johnson Pty. Ltd. These provided us with a lesson on first aid and the developments made in the processes involved in the preparation of catgut. Finally we were privileged to see a detailed lesson, direct from the "Storkitorium," on Bathing Baby—future reference for most.

Future activities that are being arranged include the annual football match with the Master Pharmacists, and also a car "trial" followed by a barbecue.

At our July meeting, Professor Polya, Professor of Organic Chemistry at the Tasmanian University, will give a talk entitled "The Pharmacist in a Changing World." A good attendance is expected, particularly of students of Organic Chemistry.

—Brian Cannon, L.P.O.

WEST AUSTRALIAN PHARMACY STUDENTS' ASSOCIATION

The infamous Car Trial, that desperate battle between man, woman and machine, occurred not without mishap. Such were the hazards of the course that the vice-president and the L.P.O., their navigators rather perturbed, arrived at Araluen almost three hours after everyone else. Peter says he'll swear on a B.P. that he was driving all the time; myself, I never took my hands from the wheel. The fun and games at Araluen were thoughtfully provided by Wild William King and his Singing Spansules. Thanks to Bill (the trial organiser) and friends on control points for a most enjoyable day.

Those who were not totally incapacitated as a result of the aforementioned trial had the golden opportunity of clinching their life disability on Sunday, July 9, as pharmastudes took to the field to defend their football title against Rumbles Ltd. Lack of an umpire presented few problems. However, at half-time such a gentleman was procured, but, still suffering the effects of a "morning after," judged the match from the comfort of a car parked in the centre of the oval. After a welcome adjournment to Rumble's warehouse, wounds were miraculously healed in amber fluid and strained friendships restored. Once more Rumbles showed their generosity in providing the refreshments.

W.A.P.S.A.

The end of term cabaret is planned for August 19. Dalkeith Hall is hoped to be the setting for a "Night in Paris." We trust no one amongst us has actually been to Paris, and thus will not know quite what to expect. We of the committee certainly don't as yet. Nevertheless an unforgettable night's merrymaking in true pharmacy style is to be anticipated. A genuine French floor show (Spectacle d'Etage) is promised. It is also hoped our raffle will be drawn on the night. Prizes for the raffle were kindly donated by Rumbles Ltd., F. H. Faulding & Co., D.H.A. (W.A.) Pty. Ltd. Proceeds should do much to relieve the financial tension of the association.

W.A.P.S.A. has, due to a number of students purchasing textbooks elsewhere, a quantity of 1958 Pharmacopoeias and 1959 Pharmaceutical Codexes on hand. The association would be willing to release these books at a reduced rate to students or master pharmacists. If in need of either B.P. or B.P.C., please ring W.A.P.S.A. textbook office, Elizabeth Jill Vernon, 33840.

—David Cruse, L.P.O., W.A.



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003



NEW SOUTH WALES

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in N.S.W. 'Phone BU 3092.

"The fool inherits, but the wise must get."
—Cartwright.

Mr. W. K. Anderson has purchased the pharmacy at 216A William Street, Kingsgrove.

Mr. W. B. Burraston has purchased Flannery's Pharmacy, 114 Oxford Street, Paddington.

Mr. R. A. Catchpole has opened a pharmacy in Yass Street, Gunning.

Mr. L. A. Defina has purchased G. E. Plewman's pharmacy at 96B Bay Road, Waverton.

Mr. I. P. Evans has purchased the pharmacy at 60 Railway Road, St. Peters.

Mr. J. P. Field has purchased Miles Pharmacy, Artillery Crescent, Seven Hills.

Mr. J. I. Gangemi has the pharmacy at 281A Old Northern Road, Castle Hill.

Mr. and Mrs. T. A. Hawkins have purchased Manning's Pharmacy, 11 Broughton Street, Milsons Point.

Mr. R. B. Kidd has opened a pharmacy at Westfield Plaza Centre, Hornsby.

Mr. A. C. Norris has purchased Mr. Allanson's pharmacy, Smart Street, Charlestown.

Mr. J. H. Roberts has opened a pharmacy at 5 Duneba Road, West Gordon.

Mr. V. J. Iacono has purchased R. S. Mayfield's pharmacy at 279 Bay Street, Brighton-le-Sands.

Mr. R. W. McEwen has purchased McEwen's Pharmacy, 293 King Street, Newtown.

Mr. R. K. Phippard has purchased Mr. J. J. McManus's pharmacy at Tweed Heads.

Mr. B. T. Roche has opened a pharmacy at 35 The Boulevard, Lakemba.

Mr. and Mrs. I. D. Thompson have purchased the pharmacy at 4 Coronation Parade, Enfield.

Mr. H. D. Carroll, formerly of Blayney, has sold his pharmacy to Mr. R. O'Reilly.

Mr. G. S. Develin of Parramatta has sold his pharmacy to Mr. John Cumming.

Mr. C. F. Barnes has purchased the pharmacy at 39A Penshurst Street, Penshurst. This pharmacy will be known as "The Family Pharmacy."

AUGUST QUALIFYING EXAMINATION

Practical Section to Commence August 8

Intending candidates for the August Qualifying Examination should note that the Practical Section will commence on August 8 instead of August 7 as advertised, owing to the fact that the University will be closed on August Bank Holiday.

DRUG AUTHORITY WITHDRAWN

The New South Wales Government Gazette of July 14, 1961, carries a notice of the withdrawal as from July 31, of the authority of **Dr. Reginald Ralph Pilkington** to procure and be in possession of drugs to which the Police Offences (Amendment) Act applies, and to issue prescriptions for such drugs.

Withdrawal of this authority followed the conviction of Dr. Pilkington for breaches of the drug laws.

THE PHARMACEUTICAL SOCIETY OF NEW SOUTH WALES

Pharmacy Ball 1961

The 1961 Pharmacy Ball will be held at the Trocadero on Monday, August 7.

Tickets are now available from the Society's Rooms, "Science House," 157 Gloucester Street, Sydney. 'Phone BU 3092. Admission 30/- per person. Table reservations may be made by ringing the Trocadero (MA 6431). Proceeds to Pharmacy Research Trust.

NEW SOUTH WALES—Continued

VALE GEORGE EDMOND THOMAS

The many friends of Mr. Keith E. Thomas will regret to learn of the death of his father, George Edmond Thomas.

The late Mr. Thomas, who was 86 years of age, led a full life indeed, in service to the community. Following the vocation of school teacher, in his heyday he was ever to the forefront in Christian endeavour.

The funeral took place on July 5, leaving the West Chapel of the Funeral Home, Railway Parade, Burwood, after a service for Rookwood Crematorium.

N.S.W. CHEMISTS' GOLF CLUB

Meeting at Avondale Golf Club: June 28

Results:—

Four Ball, Best Ball Stableford:

	Points
Winners: Peter Ryan (21) and Tom Simpson (20)	43
Runners-up: Greg Yum (16) and John Diamond (27)	42
Individual:	
A Grade: Max Jones (8), on count-back from John Plunkett (9)	34
B Grade: Vere Payne (16)	36
C Grade: Rolland Bennett (26), on count-back from Grant McLeod-Jones and Brian Manning	31

Next Meeting and Annual Meeting.—The next meeting will be held at Elanora Country Club on Tuesday, August 22 (starting time 9 a.m.), followed by the Annual General Meeting at 6 p.m.

NEW TRUST PLANS £6000 A YEAR DRUGS RESEARCH

The Pharmaceutical Society of N.S.W. will endow a £6000-a-year trust for research on drugs.

The President of the Society, Mr. J. F. Plunkett, said recently that the trust would provide for fundamental research into the use and action of drugs.

It would be called the Pharmacy Research Trust and would operate through the Pharmacy Department of the University of Sydney.

The director of research would be the Professor of Pharmaceutical Chemistry at the University, Professor S. E. Wright, a member of the Council of the Society.

Mr. Plunkett said: "A good deal of fundamental work on drugs is not attempted by manufacturers who are more interested in developing new drugs for specific purposes.

"We wish to tackle two types of problems—those involving fundamental research and those applicable to conditions peculiar to Australia."

Mr. Plunkett said the trust might provide for:

- A study of the mechanism of drug absorption to see if it could be improved and drugs thus be made more effective.
- A search for forms of drugs which were not destroyed when taken by mouth.
- A study of the action of drugs on the various organs of the body and modification to improve that action.
- A study of drug deterioration rate under Australian conditions, such as a study of the length of retention of potency in high temperatures and high humidity.

Contributions of £4000

Mr. Plunkett said these would all be longterm projects.

The trust would need an initial capital of about £6000 and a yearly income of the same amount.

"More than £4000 has been given by the 2600 members of the society.

"In other words, everyone's family chemist is contributing to the trust."

The Society hoped to raise more funds from the drug manufacturing and wholesale companies.

"Once the trust is operating we hope to employ at least two assistants for Professor Wright," Mr. Plunkett said. "We will also make grants of varying sums to students who are doing research work of interest to us."

The trust will be inaugurated at a function at Sydney University on August 9, attended by the Minister for Health, Mr. W. F. Sheahan, and the Vice-Chancellor of the University, Professor S. H. Roberts.

—From "The Sydney Morning Herald," July 10, 1961.

RESEARCH ON DRUGS

The Pharmaceutical Society of New South Wales has made a public-spirited gesture which deserves to be noted and welcomed. It proposes to endow a £6000-a-year trust for fundamental research into the use and action of drugs. This will operate through the Pharmacy Department of the University of Sydney, and that fact alone should be a guarantee of both the justification and the worth of the type of research which the Society contemplates. According to the Society's President, "everyone's family chemist is contributing to the trust."

The Federal Pharmaceutical Guild did not endear itself to many Australians by its initial bitter opposition (of which we now hear no more) to the Commonwealth's new pharmaceutical benefits scheme, which involves a 5/- fee for each prescription. It is therefore gratifying to find that at least a section of its membership has realised the need to present to the public a more agreeable image of its activities—one which is exclusively concerned with the common weal, and not with the financial health of its own members. It must be hoped that the drug industry can be induced to take a similar view.

Little more than a year ago, Mr. Calwell let loose a critical blast at this industry, saying that, in Australia, sickness was paying it "handsome dividends." It is not necessary to agree with him before suggesting that the industry might well contribute modestly to fundamental research of the kind now proposed, and especially to one aspect of it—a study of the rate of drug deterioration under Australian conditions (including high temperatures and high humidity). It is obviously futile to expect overseas research establishments to do this kind of work for us.

—(Sub-leader "S.M.H.", 11/7/61.)

LETTERS TO THE EDITOR

CONTRIBUTIONS TO MEDICAL RESEARCH

Sir,—There should be no doubt about the extent of the contributions being made by the pharmaceutical industry to medical research in Australia ("Herald," July 11).

Apart from numerous other contributions in Australia of which I am aware, the pharmaceutical industry is the major contributor to the Post-Graduate Medical Foundation of the University of Sydney. It has contributed over £50,000 during the past 2½ years and is continuing its support at the rate of about £20,000 a year.

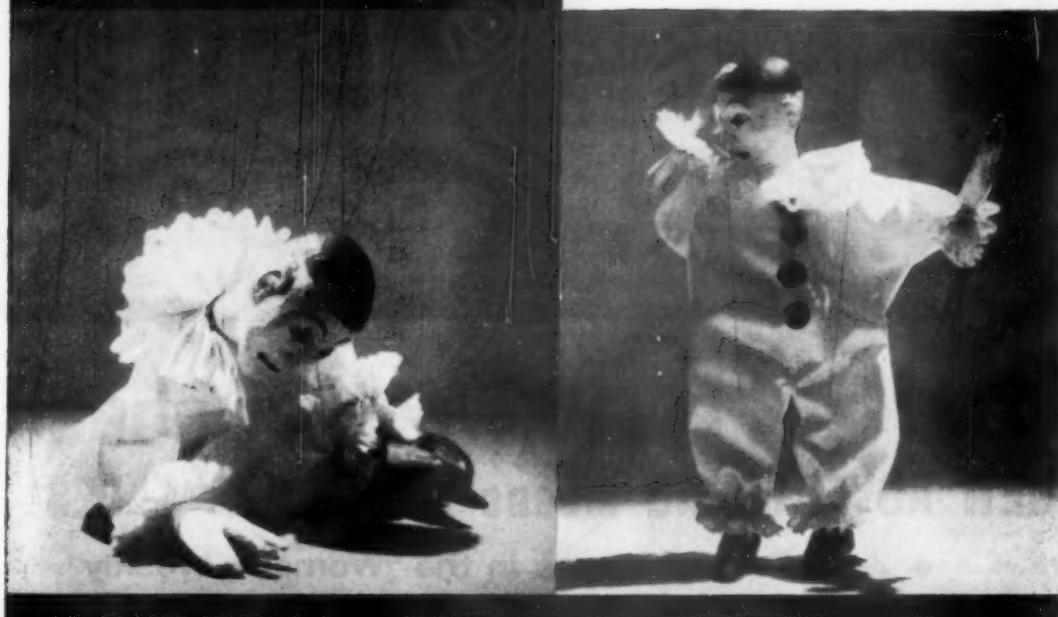
It was entirely due to promises of support by members of the pharmaceutical industry that the foundation came into being.

V. M. COPPLESON,
Hon. Director,
Post-Graduate Medical Foundation,
University of Sydney.

—(S.M.H. 12/7/61.)

Sir,—It was pleasing to have your editorial support for the research trust initiated by the Pharmaceutical Society of N.S.W., whereby research into some fundamental aspects of drug usage and action will be assisted materially in the Pharmacy Department of the University of Sydney.

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NEW SOUTH WALES—Continued

I would like to point out, however, that a number of the members of the drug industry have, for the past three years, contributed over £22,000 towards the provision of equipment for the department, thus enabling research of the nature described by the trust to be commenced. I am sure that the support of the drug industry for the research and teaching programmes of the department will be continued through the research trust.

S. E. WRIGHT,
Prof. Pharmaceutical Chem.,
University of Sydney.
—(S.M.H. 12/7/61.)

STERILISATION OF EYE DROPS

Extracts from the papers

People had been sent blind because pharmacists were not preparing sterile eye drops, an Adelaide specialist said recently.

The Commonwealth Pharmaceutical Benefits Act should be amended to provide for the proper sterilisation of eye drops, he said.

The specialist, Dr. D. O. Crompton, of North Adelaide, says in a recent article in "The Medical Journal of Australia" that although most eye drops are prepared under standards that demand cleanliness, the standards do not require sterility. Because of this, infectious diseases had entered the eyes of people using the eye drops.

"Older pharmacists are not trained, and few pharmacists are equipped to prepare such sterile solutions," Dr. Crompton said.

He said many people had been blinded by contaminated eye drops.

"It is to be hoped that wholesale firms will eventually prepare the solutions," he said.

Dr. Crompton described the results following the use of contaminated drops as "disastrous."

A Sydney doctor had illustrated the "disastrous" results by telling of three of his patients who recently underwent cataract extractions in the same theatre and were nursed in the same ward.

After treatment with eye drops, two of the three patients had to have an eye removed.

The third patient was blinded in her only eye.

A fungus was isolated from some drops used in those cases.

The responsibility for the matter rests with the medical profession," Dr. Crompton said.

"The pharmacist who has a pressure cooker, a supply of ordinary glass dropper bottles and adequate training can fulfil our requirements.

"But it is doubtful if he could guarantee the sterility of the contents of any of the present 'polythene' bottles which he might prepare."

Eye drops should not be put in bottles stoppered with corks.

Corks were a well-known source of infectious disease, and when doctors wrote a prescription for eye drops they should specify that they be supplied in some form of dropper bottle.

In a previous article on the subject Dr. Crompton complained that in many hospitals the tops of bottles containing eye drops were left loosely in the bottles for weeks, or even months.

"Air contamination was inevitable," he said.

Eye drops could also be infected if a dropper that had been in contact with an infected eye was replaced in a bottle.

Hospitals could take care to make sure the droppers were only used once, but in the case of outpatients this was much more difficult, Dr. Crompton said.

"The Pharmaceutical Benefits Act should also provide payment for the sterilisation of eye drops," he said.

Reply by Society President

The President of the Pharmaceutical Society of N.S.W., Mr. J. F. Plunkett, said, "Pharmacists are doing all that is required to dispense eye drops properly."

"Lectures are given fairly regularly so they can keep up to date."

"The Pharmaceutical Society certainly tries to educate its members in the proper methods of dispensing eye drops."

"Extreme care is taken in their preparation and only first-quality ingredients are used."

"Stopper bottles must be used, and these bottles have to be sterilised."

"Most of the bases we use for eye drops have special preservatives, so the danger of contamination is small."

—(Sun-Herald, 9/7/61.)

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of New South Wales met at 52 Bridge Street, Sydney, on July 11, at 8 p.m.

Present.—Mr. C. G. Gostelow (Chairman), Professor S. Wright, Messrs. G. Simpson, K. Thomas, G. Mallam, K. Cartwright, E. Dempster, L. Smith and G. Harman.

Applications for Registration were approved as follows:—

(a) Having passed Qualifying Examination: Glen Thomas Watson Miller, Nicholas John Napoli, Paul Willard Newbury and Robin Deirdre Smith.

(b) By Reciprocal Agreement: James McPherson (from New Zealand) and Trevor Robert Park (from Queensland).

(c) By Restoration: John Cumming and George Arthur Kaye.

Foreign Chemists—Section 11(e).—An application from Constantin Boscopoulos, American University of Beirut, was referred to the Sub-Committee on Foreign Chemists.

Certificates of Identity were issued to Joan Elizabeth Marshall (to Victoria), Alan John Papps (to Victoria), Bruce Archie Moore (to Great Britain), Michael Bruce Rogers (to Great Britain) and Paul Victor Williams (to Western Australia).

Poisons Act.—Deaths from the following Poisons had been notified since last meeting, viz.: Sodium Bromate 1, Barbiturates 2.

The attention of the Poisons Advisory Committee was to be requested to consider placing Sodium Bromate in Schedule 2 of the Poisons Act.

Apprenticeship Indentures.—The registrations comprised two transfers.

Correspondence.—From Police Department notifying the prosecutions of—

1. R. C. Solomon, Park Street, Sydney, and
2. Halicas' Pharmacy, King's Cross,

for selling restricted drugs without a prescription.

From Repatriation Department re Cadetship scheme in Pharmacy.—The provisions of the Pharmacy Act were to be explained to the Department.

From Secretary, Hunter Valley Pharmacists' Association re labelling of products under Poisons Regulations.—An appropriate answer was to be given.

From Pharmacy Board of Victoria enclosing rough draft of a Poisons Bill. Copies were to be made and distributed to members for perusal.

Poisons Act.—

1. Sale of a product containing Amorphous silica gel, Ammonium fluosilicate, Piperonyl Butoxide, Pyrethrins and Petroleum Distillate.

Included in Schedule one Part two.

2. Defender Co. Pty. Ltd.—

(a) Defender Slug and Snail Killer.

(b) Defender dual purpose pellets.

These labels were considered to be satisfactory.

3. Poisons Advisory Committee, re Flick's Fly Cake. Noted.



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NEW SOUTH WALES—Continued

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of New South Wales met at "Science House," 157 Gloucester Street, Sydney, on July 4, at 7.45 p.m.

Present.—Councillors J. F. Plunkett (Chairman), E. G. Hall, K. A. Cartwright, Mavis Sweeny, W. R. Cutler, S. E. Wright, R. M. Dash, A. F. Winterton, B. G. Fegent, S. M. Palfreyman and H. W. Read.

Welcome to Secretary-Designate, Mr. A. C. Fraser.—

Mr. Plunkett said: "I wish to extend a warm welcome to the Secretary-elect, Mr. A. C. Fraser. I know that in the years to come his association with the Society will result in mutual advantage to both."

Mr. Fraser, responding, said: "I will do my very best. I seek your understanding and help. It is my ambition to carry on to the satisfaction of all concerned."

Limitation of Intake, University of Sydney.—Mr. Plunkett said: "You have all heard of the limitation of intake which has been decided upon by the University. The intake for pharmacy has been fixed at 240."

Vacational Employment.—It was reported that 314 replies had been received from Degree Students.

Mr. Fegent thought the response was very good.

Mr. Plunkett said there would need to be a meeting to go through the replies.

It was decided that Mr. Fraser should sort out the replies into the two categories—"Yes" and "No".

Draft Letter to Master Pharmacists.—Mr. Palfreyman said he had prepared an amendment to the original draft.

Mr. Plunkett then read to the meeting the revised draft.

It was decided to refer the original draft and the revised draft to Mr. Fraser for amalgamation and possible additions to the amalgamation to produce a suitable letter for sending to Master Pharmacists to persuade them to take the rather large number of Degree Students who would require employment during vacations.

It was decided to hold a committee meeting of the Vacational Employment Sub-committee on July 25, and to invite to the meeting Mr. L. W. Smith, of the Guild, and Mr. Geoff Winterton, the students' representative.

Pharmacy Research Trust.—It was decided that the next meeting of the Research Trust Sub-committee should be held on July 18.

Buffet Dinner, August 9.—Mr. Plunkett said the date had been changed. Details relating to the Buffet Dinner were to be left to the Sub-committee.

Publicity.—Mr. Plunkett said he had been in touch with Mr. Kippax, who would send Mr. Docker of "The Sydney Morning Herald" to see Professor Wright, regarding a proposed article on the Research Trust.

It was reported that "Pix" had been up to the University and had taken pictures for publication.

Contact had been established with Mr. Farrell, Chief of Staff, who would send a reporter to the Buffet Dinner. He would also send a reporter to interview Mr. Plunkett and Professor Wright.

Mr. Plunkett reported that Del Cartwright would interview Professor Wright and himself for eight or nine minutes on the day of the function. (On T.V. Channel 7.)

Mr. Hall suggested that perhaps "The Sydney Morning Herald" could run a two-page supplement on the Research Trust. This supplement would, of course, contain advertising to pay for the cost of the supplement.

After further discussion it was decided that the President and Secretary should investigate the suggestion

of a two-page feature article on the Pharmacy Research Trust, and that the Sub-committee be empowered to proceed if they think fit.

Post-Graduate Lecture Series at Wollongong.—Mid September or early August, say, Monday, August 14, and the four following weeks.

Mr. Plunkett then read to the meeting the suggested course of Wollongong Refresher Lectures, namely:

1. Drugs Used in Psychopharmacology, by Professor S. E. Wright.
2. Sustained Release Preparations, by Mr. R. E. Thomas.
3. Hypotensive Agents, by Dr. W. J. O'Reilly.
4. Sterilisation in the Pharmacy, by Mr. R. G. Coombe.
5. Poisons Laws, by Mr. R. M. Dash.
6. Dispensing Problems, by Mr. J. Ashley.

It was decided to submit the proposed programme of lectures to the Wollongong people, and if they are happy about it, to proceed with the lectures as listed.

Lecture at Newcastle.—Mr. Plunkett said he would talk to the Newcastle people at their Annual Ball about a proposed lecture.

P.A.A. Bulletin From Mr. H. A. Braithwaite, A.N.Z.A.A.S. Congress in Brisbane.—Mr. Plunkett said he would read the document. Professor Wright said he would like to read it also.

First-aid Lectures.—Mr. Plunkett said he had been in touch with Miss Higgins. The Chairman was Dr. W. E. George. Mr. Plunkett said he would sign a letter and post it to Dr. George.

Annual Dinner.—Mr. Plunkett said it was a very nice dinner. The speeches were quite good and the diners enjoyed themselves.

A.N.Z.A.A.S. Congress, Sydney, August, 1962.—Letter No. 7 under the heading "Correspondence" from Professor S. E. Wright was read to the meeting, as follows:

"I have been asked by the New South Wales Secretary for A.N.Z.A.A.S., Professor Elkin, to convene a committee for Section 'O' of the A.N.Z.A.A.S. Conference to be held in Sydney in August, 1962. I would suggest that the main committee should act as the scientific programme committee and that the Pharmaceutical Society should set up a social committee to look after the social programme. I think that the chairman of the social committee should be the Society's representative on the main committee. The secretary of the main committee will be Dr. W. J. O'Reilly of this Department."

Professor Wright said the Society should set up a committee as recommended in the letter; possibly the social activity to be introduced could be combined with Country Week.

Regarding the main committee, it was resolved that Mr. Plunkett be the Society's representative on the main committee.

Letterhead.—General Correspondence. The proposed letterhead incorporating the Society's device was approved.

Correspondence.—Dr. W. F. Simmons: With very great pleasure received letter of congratulation from Council on award made by B.M.A.

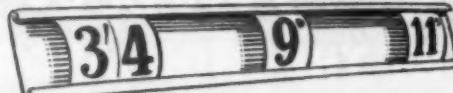
Dr. E. S. Stuckey, expressing thanks for very pleasant evening spent at annual dinner.

Dr. L. Emmet McDermott, conveying thanks for opportunity to attend annual dinner. A most enjoyable evening. "The atmosphere which prevailed throughout the evening left nothing to be desired."

To Mr. Norman Ellis, N.H.V.P.A., concerning proposed lecture at Newcastle.

To Mr. Warwick Landers, Congress Director, S.U.P.A., asking further concerning entertainment by the Society of certain visiting students who are to visit Sydney for the N.A.P.S.A. Congress. Mr. Winterton said he had inquired what the S.U.P.A. would prefer, and he said a donation would be acceptable. The matter was allowed to stand over for the present.

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NEW SOUTH WALES—Continued

Meeting With Guild Executive.—Mr. Plunkett said that a tentative date had been fixed—July 20—for a meeting with the Guild Executive on a number of matters.

New Members Elected.—Malcolm John Andrew, Seaforth; Oreste Francis Levi, Punchbowl; Miss Barbara Lindsay, Homebush; Donald Edward McLeod, Liverpool; Nicholas John Napoli, Bankstown; Miss Bernardette O'Brien, Lane Cove; Patrick David O'Brien, Inverell, and Charles Buttimore Worsley, Sydney.

Advancements to Full Membership.—Oroya Charles Graham, Balgowlah; Miss Margaret Eleanor Knowles, Gordon; Miss Patricia Bernadette O'Connor, Middle Cove, and Miss Helen Mary Seale, Cheltenham.

Reinstatement.—Miss Margaret Anne Cochrane, East Maitland.

General.—Mr. Hall said that Mr. Bob Bowie, of Johnson & Johnson Pty. Ltd. had suffered a tragic loss upon the electrocution of his only son. It was decided to send a letter of condolence to Mr. Bowie.

Death of Mr. G. E. Thomas.—Mr. Hall said that Mr. Keith Thomas's father had passed away. It was decided to send a wreath from the Society.

B.M.A. Ball.—Mr. Plunkett said he had been invited to attend the B.M.A. Ball on July 19. The Secretary was asked to accept the invitation on behalf of Mr. Plunkett.

The meeting terminated at 10.10 p.m.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the New South Wales Branch of the Guild met at "Science House," 157 Gloucester Street, Sydney, on July 13, at 8 p.m.

Present.—Messrs. L. W. Smith (Chairman), W. F. Pinerua, K. W. Jordan, R. W. Feller, R. L. Frew, R. S. Leece, W. G. Sapsford, C. D. Bradford, J. N. Young, K. A. Cartwright and K. E. Thomas.

Meeting of Executive.—The Secretary reported that the Executive had met earlier in the day to discuss financial adjustment with the Society concerning the assets to be taken over by the Society in full, such as the carpet, board room table and chairs, sliding door, etc.

It was decided that lists of the furniture, fittings, etc., purchased by the Guild, be given to the Society and correspondingly lists of the items purchased by the Society be exchanged with the Guild. The details shown on both lists would prevent any possible future misunderstanding.

Meeting Between Guild and Society Executive.—Mr. Smith said the meeting (July 20) would be held to discuss the allocation and adjustments of assets.

Kodak Dinner.—Mr. Gordon Robertson suggested some date in September. It was decided to advise Mr. Robertson that September 26 would be a suitable date for the dinner.

Zone Meetings

Meeting at Chatswood: Mr. Young said that the meeting at Chatswood had been postponed until warmer weather prevailed, say, until September. Agreed.

North Sydney Zone: Left in Mr. Young's hands to arrange for a meeting, say, early in September.

Unfavourable Press Publicity.—A member referred to the article on Eye Drops in the "Sun Herald" of July 9. The Federal Government would not pay for a sterile job. Complaints had been received from doctors and they would be dealt with by the Committee.

It was reported that hospitals used a pre-sterilised form where there had been surgery.

In relation to the plastic dropper bottles, the question of sterility was not taken into account; it merely referred to the supplying of a container which people could use without a separate dropper.

Regarding the attack on the Guild in the sub leader in "The Sydney Morning Herald" on July 10, a member pointed out that this represented a continuation of an unhappy situation regarding the activity of the Guild on the National Health Service level.

"The Sydney Morning Herald" had never got over its first attack on the Guild, and this was a follow-on of its former policy. We must realise that the "Herald" looks upon pharmacy with disrespect.

Mr. Tennyson had been contacted on the matter.

Building at 199 Clarence Street.—Mr. Smith said that progress was being made in accordance with the plan. The Executive had selected carpets for the board room and the Secretary's office. The date of completion was still estimated at the first week in September.

Merchandising and Publicity.—Mr. Pinerua produced coloured brochures which would be posted to Guild members with a covering letter, probably next week. The brochure explained to members the successes already attained in the scheme and it would try to get into the scheme members now not contributing. The brochure was a joint production by Mr. Cartwright, the Agency, Mr. Pinerua, Mr. Ross and Mr. Tennyson. The letter would thank members who are subscribing, and appeal to those not in, to come into the scheme. This would be followed by a further letter.

Mr. Pinerua continued that the "Hair Care" Campaign would be breaking in August. The advertising would be most spectacular.

A. Mr. Madden from Eric White & Co., a public relations man, had offered to carry out public relations work for nothing.

It had been decided to take a full page in "Woman's Day", in mono. He had been in touch with Queensland and South Australia, and both States were enthusiastic and agreed to pay their share of the production.

He had phoned Mr. Ross concerning Victoria, and proofs were to be sent.

In the "Woman's Day" there would be three pages of editorial of a public relations nature. Also the editorial matter (articles on hair care) would go into the country press.

Mr. Pinerua said that the Society's Research Trust would be opened next month, and there would be a supplement in "The Sydney Morning Herald"—1 page. Various firms would be co-operating in the advertising to support the supplement. It would cost £100 for a section of the page devoted to advertising. Purely public relations telling what services the Family Chemist provides.

It was decided to spend £100 in advertising in the supplement.

Reports of Sub-committees were dealt with as follows:

(A) **Trade and Commerce.**—The report of the meeting held on June 27 had been circulated.

Federal Trade & Commerce Conference, Melbourne. Mr. Frew said he would call a meeting of the Sub-committee to discuss remits.

Special Christmas Wrapping Paper and Bags: Mr. Frew said this was 50% better than last year.

New Wrapping Paper: A firm had submitted another sample, but it was still not suitable.

Aerosol Hair Products: Mr. Frew said a statement had been published in the "Bulletin" showing a comparison.

Mr. Jordan said the comparative statement had been very well compiled.

(B) **Pricing.**—Mr. Leece said a report of the meeting held on July 3, had been circulated.

N.S.W. Dispensing Drug Tariff: Comparisons were being made between the N.S.W. Tariff and the Australian List.

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For faster sales

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Plastic price tickets in contrasting colours of WHITE on BLACK or WHITE on RED

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Comprising 100ft. $\frac{3}{4}$ in. plastic price stripping plus 50 dozen assorted plastic numbers and signs.

NOTE OUR PRICE: the lot £4/10/- (inc. post.)

COLOURED INSERT FOR ABOVE STRIPPING

At 25/- Per 100ft. IN ALL COLOURS

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"La Cross"

SPECIAL DISPLAY STAND

Beautiful Red and Gold Display Stand imported from America holds 1 dozen "La Cross" Tweezers with assorted points.

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No side effects observed.

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INDICATION: Peptic/duodenal and gastric ulcers, Gastritis. Chronic Alcoholic Gastritis.

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NEW SOUTH WALES—Continued

Election of Six Members to the State Branch Committee (Rule 20): It was reported that nominations had been received from Messrs. C. D. Bradford, K. A. Cartwright, R. W. Feller, R. L. Frew, R. S. Leece, W. G. Sapsford.

The Secretary said that as six nominations only had been received, there would be no election by postal ballot.

Election of Officers: State Branch Committee (Rule 21(e): It was decided that nominations should close on Thursday, August 10.

New Members Elected.—Warwick Kingston Anderson, Kingsgrove; Colin Frederick Barnes, Penshurst; Robert Arthur Catchpole, Gunning; Louis Anthony Defina, Waverton; John Patrick Field, Seven Hills; Joseph Isidoro Gangemi, Castle Hill; Thomas Arthur Hawkins and Mrs. Patricia Adelaide Hawkins, Milsons Point; Raymond Bruce Kidd, Hornsby; Adrian Clive Norris, Charlestown; James H. Roberts, West Gordon; William Bede Burraston, Paddington; and Iorweth Potter Evans, St. Peters.

Reinstatements.—Vincent Joseph Iacono, Brighton-Le-Sands; Roy Wallace McEwen, Newtown; Raymond Kingsley Phippard, Tweed Heads; Brian T. Roche, Lakemba; and I. D. and Mrs. J. H. Thompson, Enfield.

The meeting terminated at 11 p.m.

Commonwealth News



Mr. Eric Scott, Federal President of the Guild, and Mrs. Scott leaving Melbourne (on July 2) on their 14 weeks' world tour.

DOCTORS WILL PRESCRIBE

Rx "Neomycin Ointment"
"Penicillin V Tabs."
"Penicillin V Oral Suspension"
"Gutt. Polymyxin"

TO FILL SUCH PRESCRIPTIONS, THE CHOICE
IS YOURS. THE FOLLOWING STANDARD
PREPARATIONS WILL MEET YOUR REQUIREMENTS

SIGUENT NEOMYCIN

Formula: 5 mg. neomycin sulphate per G. paraffin base ointment.

Pack: 1 oz. collapsible tube.

Directions: Apply to affected area 2-5 times daily.

Indications: Common skin infections, including school sores, boils, etc.

A quality product for quick dispensing of "open" prescriptions.

CILICAINE V-K TABLETS

Manufactured from high-quality materials under careful analytical control. Cilicaine V-K Tablets provide maximum blood levels through good disintegration and rapid absorption. Cilicaine V-K Tablets can be dispensed as P.B. Item No. 595 as 60 mgm., 125 mgm. and 250 mgm. tablets and are ideal for "unbranded" N.H.S. prescriptions.

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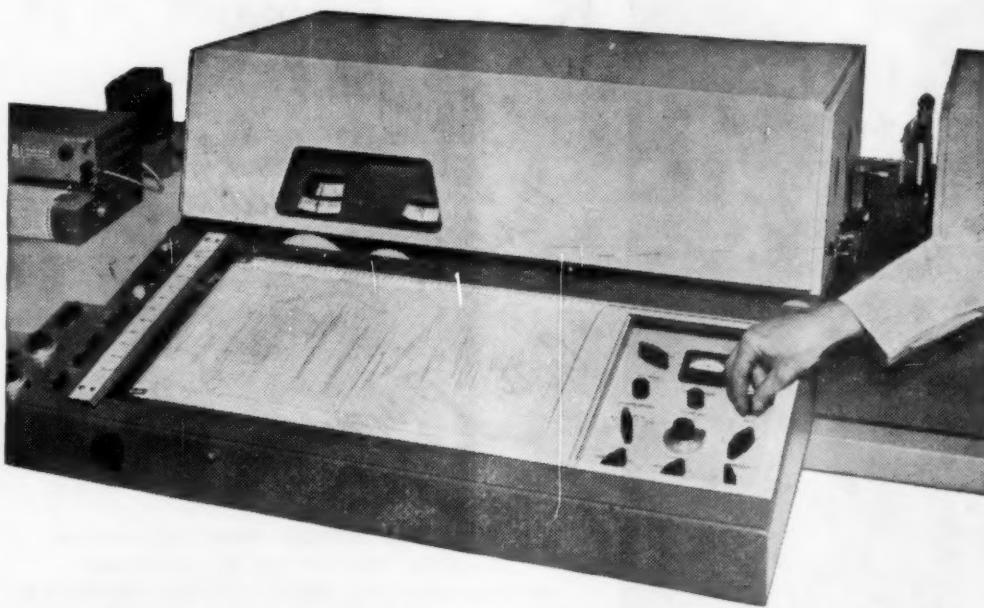
A specially formulated suspension in a defatted oil base to ensure rapid, complete reconstitution from all conditions of storage. The special base, and the free measuring spoon, guarantees accurate uniform dosage, with maximum patient acceptance and co-operation. Minimises associated diarrhoeas. Prescriptions for "Penicillin V Oral Suspension" (P.B. Item No. 595) call for those features exemplified in Cilicaine V Oral (Suspension). Available in 2 fl. oz. bottles, containing 125 mg. Penicillin V in each fl. dr.

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particularly valuable in helping us to maintain the highest quality in our products.

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Up-to-date instruments, such as the infra-red spectrophotometer, help us in the continual advancement of product standards.

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VICTORIA

PERSONAL and GENERAL

State News

Members in Victoria desiring publication of personal items of interest are invited to write or telephone details to the Editor (38-6254).

Mr. Harry Gorr will leave for a short trip to the U.S.A. on September 10. During his absence his pharmacy will be in the charge of Mr. Douglas Pearson.

Mr. T. A. Grant, a pharmaceutical chemist registered in Great Britain, and for the past nine years working as a pharmacist and secretary of a hospital in Rhodesia, recently came to Victoria and has been registered by the Pharmacy Board. He has accepted a position with Mr. A. Ramsay, of Mildura.

Mr. Gilbert Block was farewelled by friends and relatives at Horsham early in July, prior to leaving for overseas on the "Castel Felice." Mr. Block is the elder son of Mr. and Mrs. S. F. Block, of North Balwyn, formerly of Jeparit. He served his first two years of apprenticeship in Horsham.

FIRE IN DISPENSARY

A fire, which police believe was deliberately lit by thieves, destroyed the North Melbourne Dispensary on July 4.

It was estimated that £2500 worth of damage was done to the premises and stock, which are owned by the North Melbourne United Friendly Society Dispensaries.

The thieves set fire to piles of paper and rubbish and stole £50 in cash.

This is one of a series of fires which have occurred in pharmacies in the metropolitan area in recent months.

GOLF

The Victorian Chemists' Golf Day Meeting, held at Royal Melbourne Golf Club on July 11, attracted an attendance of approximately 80 members. Royal Melbourne, as always, was in wonderful condition. This meeting was restricted to members only.

Results:-

A Division: Geoff Henshall, 35 points.
B Division: Monty Ross, 35 points.
C Division: Max Digby, 34 points.
D Division: Don Mitchell, 46 points.

Final results of this year's President's Trophy:-

Winner: F. J. (Bill) Alcock, 146 points, from Ian Barnes with 142 points.

The Annual Meeting will be held on August 2.

THE 1961 VICTORIAN POCKET YEAR BOOK

The 1961 Victorian Pocket Year Book just released records the progress of the State during 1960 and will be of interest to many people.

Its small size and compact form, its wide range of topics and up-to-date statistical data will be appreciated by all who require general information on Victoria.

Businessmen, students and those going abroad will especially appreciate this handy reference book.

The subjects dealt with include Agriculture, Building Operations, Employment, Factories, Hire Purchase, Hospitals, Insurance, Mental Hospitals, Municipal Expenditure, Parliament, Population, Railways, Registrations of Motor Vehicles, Retail Price Index, Retail Sales, University, Vital Statistics, Wages, Wheat and Wool Production.

In addition, the Pocket Book lists members of the State Ministry, State Parliament and principal Government Departments.

Copies, priced at 2/- (2/5 posted) are obtainable from the Deputy Commonwealth Statistician, Third Floor, Commonwealth Bank Chambers, 8 Elizabeth Street, Melbourne.

OBITUARY

Percival James Denny Preston

We regret sincerely to announce the death of Mr. Percival James Denny (Val) Preston, of Reservoir, on July 6.

Mr. Preston had survived a routine operation and was recovering when he died suddenly.

Mr. Preston did his pharmaceutical course in Victoria. He was apprenticed to Mr. A. L. Cunningham, of Kew, and passed his Final Examination in 1936.

Val Preston was a prominent and popular personality. He interested himself in many pharmaceutical activities, and was generally liked and respected. The large number of mourners at the funeral was indicative of the esteem in which he was held, and the wideness of his activities within pharmacy and in other spheres.

Mr. Preston leaves a widow and a large family to whom we extend our sincerest sympathy.

Wemyss A. Gordon

The esteem in which W. A. Gordon (whose death was reported in the last issue of the Journal) was held was indicated by the obituary notice in the "Murrumbidgee Irrigator" of June 16. This paper devotes a whole column to the notification of Mr. Gordon's death.

Mr. Gordon established the pharmacy which he conducted for so many years at Leeton, N.S.W.

At the time of his death he was 85 years of age, and he died peacefully in his sleep. It is recalled when he first opened his shop at Kurrajong Avenue. This was later moved when the town commenced to move, and he opened in 1916 the pharmacy which still carries his name.

Mr. Gordon conducted that pharmacy until 1947, when he sold the business to Mr. Lin Gordon, who was no relation but who was employed by the late Mr. Gordon for several years prior to his retirement.

The late Wemyss Gordon was spoken of as being a very friendly man. He was a good churchman and a good husband. He made many benefactions and was a supporter of many civic movements in the district. The "Murrumbidgee Irrigator" records that there were very many other little unknown acts of generosity carried out by Mr. Gordon during his long period of service in Leeton and district.

Mr. Gordon is survived by his widow, three sisters and two brothers. It is reported that the sisters are in their 90's and the brothers in their 80's. Three brothers pre-deceased him. There were no children.

VICTORIA—Continued

MERCHANDISING LECTURES

The 1961 course of Merchandising lectures organised by the Pharmaceutical Society of Victoria and sponsored by Vick Products Pty. Ltd. was launched on July 17.

The first lecture of the series, "Our Young Pharmacist and His Future," was given by Mr. H. A. Braithwaite, President of the Pharmaceutical Association of Australia, and a past President of the Pharmacy Board.

Mr. Braithwaite's lecture was preceded by a brief introduction by Mr. A. D. Glover, Managing Director, Vick Products Pty. Ltd. In the course of his remarks Mr. Glover spoke with considerable optimism concerning the growth of commerce and industry in Australia under an expanding economy. He emphasised the need for including in the education of pharmaceutical chemists a sound knowledge of merchandising and business practice.

Lecture No. 2, "Banking and Business Records," was delivered on July 31, the lecturer being Mr. R. T. Bossence, F.A.S.A., who has been an accountant to chemists for the past 20 years.

The remaining lectures of the series are:

3. **Monday, August 14, 8 p.m.**

"The Development and Application of Prescription Pricing."

Comparisons and contrasts of Government and private pricing.

Lecturer: Mr. R. Grinlington, Pricing Officer of the Victorian Guild and a member of the Victorian State Branch Committee of the Guild.

4. **Monday, August 28, 8 p.m.**

"Modern Retail Trends . . . Pharmacy's Position."

How to safeguard net profit.

Lecturer: Mr. F. H. Bedford, Vice-President of the Victorian State Branch of the Guild.

5. **Monday, September 4, 8 p.m.**

"Display and Advertising."

At the commencement of this lecture the Burroughs Wellcome film on Pharmaceutical Selling will be screened.

"The Major Principles of Display as Applied to Modern Retail Pharmacy."

How correct methods of display can increase your counter sales.

What, where and when to display.

Proper planning and timing.

Lecturer: Mr. E. W. Simms, Manager of the Amcal Organisation.

"Advertising."

Future of advertising.

A nationally advertised product.

Retail advertising—as applicable to Pharmacy.

Lecturer: Mr. John J. Cumming, Advertising Consultant to the Federated Pharmaceutical Service Guild.

6. **Monday, September 18, 8 p.m.**

"Acquiring a Business."

A planned approach.

Lecturer: Mr. N. F. Keith, President of the Victorian State Branch of the Guild.

SALARIED PHARMACEUTICAL CHEMISTS' ASSOCIATION

The Committee of Management met on July 12 at 3 Beryl Street, Burwood.

Present.—Mrs. E. Griffiths, Messrs. W. Mercer, T. Anderson, M. Blachford, H. Tregellas, J. Snow (Chairman), O. I. Cross (Secretary), and visiting, A. Jackson (Western Australia).

Printing.—Mr. Blachford detailed printing arrangements, and was congratulated by those present for fostering a streamlined service to members.

Federal Account.—20 per cent. of funds were transferred to this account.

Films at Quarterly Meeting.—The Secretary reported that some outstanding documentary films of interest to pharmaceutical chemists were available. It was resolved that approximately 60 minutes of the Quarterly Meeting to be held on August 22 would be devoted to films.

National Health Scheme.—The President reported that the Minister for Health had advised that he had assessed dispensing fees for master chemists on rates pharmaceutical chemists were being paid throughout the Commonwealth. The Minister said he had not regarded the Victorian Award as "freakish."

During discussion members commented that the Minister's statement did not run parallel with that of the Guild, and that the Minister had not referred to the Committee's claim that employers would not negotiate because they insisted that negotiation prejudiced their dispensing fees. It was resolved to correspond further with the Guild and the Public Relations Secretariat.

S.P.A. Announcement

During the Quarterly Meeting to be held at the Pharmacy College at 8 p.m. on Tuesday, August 22, approximately 60 minutes will be devoted to the screening of recommended films of medical instrument. This follows the appreciated co-operation of the Cancer Institute, the State Film Centre and the Pharmacy College (Mr. Borowski, who will show films).

—O. I. CROSS, Secretary.

SALARIED PHARMACEUTICAL CHEMISTS' ASSOCIATION

Copy of Letter Sent to Minister for Health

The Right Honorable Dr. D. A. Cameron,
Minister for Health,
Commonwealth Department of Health,
CANBERRA, A.C.T.

21st June, 1961.

Dear Sir,

My Committee of Management is anxious to bring to your notice some consequences the National Health Act and its administration by your Government have had on salaried pharmaceutical chemists and pharmacy generally.

The Salaried Pharmaceutical Chemists' Association represents employee pharmaceutical chemists in retail, dispensary and hospital pharmacies in Victoria and, since 1st June, 1961, in Tasmania.

This Association has been amazed at your reference to the Victorian Chemist Shops awards as "freakish" and perplexed at the results certain of your rulings have on the Victorian Wages Board system in those awards. While we hope to explain our attitude in this letter, we would very much like to discuss the N.H. Scheme with you at a convenient time. Many in our membership administer retail pharmacies and dispensaries, and the whole membership is vitally concerned with the scheme.

Why has the term "freakish" been used in referring to our Victorian awards? Unfortunately this Association is the only professional organisation in Australia which appoints representatives from its own ranks to industrial tribunals involving pharmacy. In other States salaried pharmaceutical chemists are represented by trade unions which have allowed their margins to fall far behind those of other professional employees.

Hence we believe that the rates in other States are freakish. For example:

Western Australia	£16 11 10
New South Wales	£23 2 0
South Australia	£19 0 6

Surely the Victorian award of £30 is the only rate in Australia which can be termed professional. Out of date and unrealistic awards existing in other States can throw little light on the true industrial picture.

Your attention is drawn to the determination set by the Industrial Appeals Court, Victoria, 11/4/60. We

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15th SEPT.

**75%
MARK-UP**

ON

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Varemoid**

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12/4 on each pack!

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will keep demand high!



NOTE :

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VICTORIA—Continued

believe that a transcript of evidence and judgment has been purchased by your department. His Honour Judge Gamble said that this was the first time the rates had been properly assessed. Quoting from the judgment, "The evidence establishes that the wage rate as expressed in the existing determination for a qualified pharmaceutical chemist of £19/15/- is not only quite out of harmony with the wage normally paid, but out of harmony with the pattern of marginal rates in industry generally." Does your Government apply the word "freakish" to other determinations made by the Industrial Appeals Court in Victoria?

Salaried pharmaceutical chemists deplore the attitude of your department that only contested awards warrant consideration in the assessment of N.H.S. dispensing fees for master chemists. Such an attitude has a disastrous effect on procedure in Industrial Tribunals, particularly the Wages Board type that exists in Victoria. Here negotiation is always encouraged and usually demanded by Wages Board chairmen, who often refuse to enter into any decision unless there is an attempt to negotiate. His Honour Judge Gamble said in the 1960 judgment previously referred to: "The procedures prescribed for meetings of Wages Boards are based on the hope inspired presumption that the parties will negotiate by motion." Here he was criticising the unwillingness of the members of the Shops Board No. 6 (chemists) to negotiate to any extent.

Thus salaried pharmacists are in a predicament where:

- A. Your Government refuses to alter N.H.S. dispensing fees following increases in awards unless:
 - 1. Our employers contest any increase we apply for;
 - 2. Such award movements are not "freakish."
- B. Our employers refuse to negotiate on wages board because this would prejudice your Government's assessment of their N.H.S. dispensing fees.
- C. The chairman of the Wages Board refuses to vote on disagreements unless negotiation has been attempted.
- D. Pharmaceutical chemists have been criticised in an industrial court of acting contrary to Wages Board procedure in not attempting to negotiate.
- E. The Victorian award is termed "freakish," yet it is the only award for pharmaceutical chemists in Australia which has been properly assessed.

We are convinced that these situations would only be clarified by discussion with you.

Yours faithfully,

(Sgd.) J. H. SNOW, President,
For the Committee of Management.

AMENDMENT OF THE PHARMACY REGULATIONS

(Extract from Victoria Gazette, No. 57, 19/7/61)

Under the powers in that behalf conferred by Part III of the Medical Act 1958 (No. 6309), the Pharmacy Board of Victoria, with the approval of the Governor in Council, doth hereby make the following Regulations (that is to say):

1. These Regulations may be cited as the Pharmacy Regulations 1961, and shall be read and construed as one with the Pharmacy Regulations 1930 and all Regulations amending the same, all of which Regulations may be cited together as the Pharmacy Regulations.

2. Regulation 32 of the Pharmacy Regulations is hereby repealed and the following substituted therefor:

"32. Duties of Treasurer.—It shall be the duty of the Honorary Treasurer to see that all moneys received by the Registrar are lodged in some bank appointed by the Board to the credit of an account entitled 'Pharmacy Board of Victoria Account,' and to pay by cheque signed by the Treasurer or the Registrar and one member of the Board such accounts as

the Board may from time to time order, by resolution which shall specify the sums of money and to whom they are to be paid."

3. Regulations 37 to 59 inclusive are hereby repealed and the following Regulations substituted therefor:

37. The course of training for persons who are serving an apprenticeship referred to in subsection (2) of section 5 of the Medical Act 1959 shall include study in accordance with Appendix B1 to these Regulations.

38. For the purpose of sub-paragraph (iii) of paragraph (b) of sub-section (1) of section 103 of the Medical Act 1958 (as amended by section 5 of the Medical Act 1959) the prescribed other subjects shall be:

Physics.
Botany.
Zoology.
Practical Chemistry.
Materia Medica.
Microbiology.
Pharmacology.
Forensic Pharmacy.

39. In respect of the matters listed hereunder and which are referred to in the Sixth Schedule to the Medical Act 1958 the following fees are fixed and determined:

Intermediate Examination of Students who were admitted to the Victorian College of Pharmacy prior to the year 1960.

One subject	£2 5 0
Two subjects	3 7 6
Three subjects	4 10 0
Four subjects	5 12 6
All subjects	7 17 6

Intermediate Examination of all other students:

Each subject	£1 10 0
------------------------	---------

Final Examination of students who were admitted to the Victorian College of Pharmacy prior to the year 1960:

All subjects (first presentation)	£9 10 0
Subsequent presentations	9 10 0
One subject only	3 2 6
Two subjects only	5 0 0
Three subjects only	6 5 0
Final Examination of all other students:	
Each subject	£1 10 0

Other Fees:

Registration of Indentures of Apprenticeship	3 3 0
--	-------

Restoration of name to Pharmaceutical Register	2 2 0
--	-------

Certificate of Identity for reciprocity purposes	2 2 0
--	-------

Registration after Final Examination in Victoria	5 5 0
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Registration on a Certificate of Competency from some other State in the Commonwealth or from the Dominion of New Zealand	5 5 0
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Registration in all other cases	10 10 0
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The preceding Regulations were made at a meeting of the Pharmacy Board of Victoria, held at Parkville, in the State of Victoria, on Wednesday, the twenty-first day of June, One thousand nine hundred and sixty-one.

The seal of the Pharmacy Board of Victoria was hereto affixed by the Registrar, in the presence of—

N. C. MANNING,
S. J. BAIRD,

Members of
Board.

F. C. KENT, Registrar.

Approved by the Governor in Council,
4th July, 1961.

A. MAHLSTEDT,
Clerk of the Executive Council.

VICTORIA *Continued*

VICTORIAN COLLEGE OF PHARMACY

Presentation of Diplomas

Approximately 700 people attended the ceremony of presentation of Final Examination Diplomas in the Assembly Hall, Victorian College of Pharmacy, Parkville, on Monday evening, June 26.

The President of the Society, Mr. F. W. Johnson, presided and welcomed the guests. He praised the Pharmacy Board for its work in the conducting of examinations and general supervision of pharmacy. As President of the Society, he welcomed everyone present, including Professor R. R. Andrew, Dean of Medicine, Monash University, who would be their guest speaker. He gave a special welcome to the graduands. He welcomed them on their success and expressed the hope that they would always regard their certificates with pleasure and pride. He reminded them that with the privileges they now acquired they assumed certain responsibilities.

He extended a welcome to the parents and masters of those who were there that night to receive their certificates. Each in their own sphere had assisted in preparing these young people to take their place at the ceremony. Mr. Johnson had a word for the parents, many of whom, he said, had to make sacrifices in many ways to prepare sons and daughters for their life's work.

To the Dean and the members of his staff he expressed the thanks of the Council for a job well done. (Applause.)

Mr. Johnson then called upon Professor Andrew to present his address. After the conclusion of the address by Professor Andrew, the Chairman called on Mr. N. C. Manning, President of the Pharmacy Board, to present the Final Examination Diplomas to 116 candidates. The graduates were then presented individually by the Dean of the College, who certified that they had completed the course and passed the examinations.

After the presentations, Mr. Manning offered the congratulations of the Pharmacy Board. He congratulated the candidates on their success and appealed to them to carry out to the best of their ability the duties and obligations imposed upon them by the laws relating to the conduct of their businesses. He also emphasised that there were moral and ethical obligations, as well as legal ones, which they assumed on going into practice.

Presentation of Fellowship Certificate

The Dean of the College, Mr. A. T. S. Sissons, introduced Mr. Alan Hibberd. He said he had completed a most satisfactory course for the Fellowship of the Society. This involved two years of strenuous study and Mr. Hibberd had acquitted himself well.

The President then presented the Certificate of Fellowship to Mr. Hibberd and offered his congratulations. This concluded the ceremony and the guests then adjourned to the cafeteria and biology room for refreshments.

ADDRESS BY PROFESSOR R. R. ANDREW

"No Man is an Island, Intire of It Selfe"

My first duty is to thank you for the honour of asking me to speak at this important ceremony, which certainly will remain in your memories always as one of the significant days in your life, and may remain because of the monumental boredom you suffered at the hands of the speaker—I'm referring to myself and not any subsequent to me.

I have no special claim to any close link with your profession, although I have enjoyed the greatest kindness and help both as a client and a doctor. God knows how many victims your profession has saved from my prescriptions—and I have always been very touched by the delicate way chemists have telephoned me and

suggested a slight amendment—*haven't you dose 1 half/TD50*—e.g., "Wouldn't a 1/100 of a grain be as effective, and possibly a little safer, than one grain?"

I have one special memory of a situation where I had close contact with matters pharmaceutical. Early in 1940, when we were in Palestine, drug supplies, like everything else, had to be rationed, and I was appointed secretary and bottle-washer to a committee presided over by Sir Neil Hamilton Fairley, then Colonel Fairley, Consulting Physician to the A.I.F. We had a considerable number of meetings and finally reduced the A.I.F. Pharmacopœia to a size which would delight and amaze the most savage therapeutic nihilist. It's amazing, I might add, how well we were able to manage with the few drugs which we were allowed. Having completed our task, a mild celebration was held at the Turf Club, which dispensed a prescription known as the Turf Club Special. I remember it dimly as pink and powerful. Next morning I woke with the feeling that there was something missing in my life. There was, and it took two guesses to register what was missing. I shan't go into the first guess. The second was dead right—the A.I.F. Pharmacopœia. My imagination boggled at the thought of a neo Mata Hari making off with the document I had left at the Turf Club. I raced around, trying to work out what I would say in extenuation at my court martial, and to my relief it was still there. My reputation suffered. Several years later I was given "safe hand" some important papers to take back to New Guinea from Land Headquarters in Melbourne, where I had been on leave. On reaching New Guinea and handing over the large envelope, almost pulp by now from my hot tropical grasp maintained all the way, I was upset to find just decipherable the unfair words, "By moderately safe hand."

I was asked by your Secreta v some time ago to give this speech a title and on brooding about this I thought



Prof. Andrew at the microphone

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VICTORIA—Continued

that the quotation, "No man is an Island, intire of it selfe," would be apt. This, as you know, is by John Donne, the 17th century English poet. When, later, I came to think about what I should say I was not completely clear why I thought this had seemed a good and apt title. But further reflection gave some unity to my rather muddled thinking, because I want to say something about the place of a teaching hospital in the community—a subject about which I know a little from sheer propinquity, as in the 25 years since graduation I have spent all my medical life, apart from the Army, in one, or attached to one. These hospitals appear to be medical worlds in themselves and in them goes on ceaselessly the three main functions of doctoring. First the care of patients, the definitive end of all our work; secondly, research, and, thirdly, teaching. Now all these aspects relate to the community, to other hospitals, to the University with which the hospital is affiliated, to the medical, pharmaceutical, dental, physiotherapy, occupational therapy and almoner services, and, of course, with the general public. "No man is an Island"—nor is a hospital and the three main functions I have mentioned are inextricably related to each other, and to the community.

It is relatively easy to make out a case for what a splendid job we do in our teaching hospitals in all these diverse activities and it is true that there are many things about which we can be justly proud. It is a little harder and certainly less popular to examine the defects which exist in these institutions, as in all human institutions. The only reason this can be a worthwhile exercise is to try and define the problems and find a solution.

I shan't burden you with any long statement of what is the proper function and purpose of a teaching hospital. But I shall tell you of some shortcomings as I see them as the result of my own observation, practice and thinking.

First about patient-care. As you know, for generations the care of the patient has been the responsibility of honorary doctors who are appointed to these hospitals. This stems from the British system, transplanted at least 100 years ago to the colonies and now standard here, although significantly no longer the method in the country of its origin since the establishment of the N.H.S. 13 years ago. Up to about 50 years ago in Melbourne the appointments were made by nepotism, favouritism or straight out bribery, and it is quite astonishing how such a corrupt system produced so many excellent men. Nowadays the appointments are made after advertisement and only those with senior

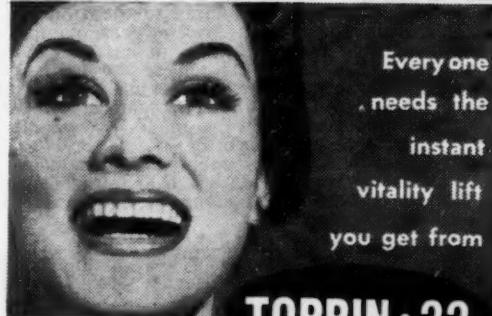


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VICTORIA—Continued

degrees or diplomas are eligible. In the main the best available consultants are successful. Years ago the advantages were very considerable both to patients, students and the honoraries themselves. These hospitals were charitable institutions and devoted care was given by the most skilful doctors in the community. They in turn enjoyed many advantages—of status, becoming well known to the profession, who referred their cases



Mr. Manning presents certificate to Barry Cathcart

for consultation; to their students, who in turn became their supporters; and they had the advantage of seeing large numbers of difficult cases which exercised their wisdom and judgment. This work they could afford to do for no monetary reward—income tax was negligible and the cost of living low. In the two half days a week they attended this could all be easily accomplished.

The situation is quite different now. While there are still very real advantages for an honorary—particularly his professional contacts and the opportunity of keeping himself informed of modern advances—very few can afford to continue this outmoded system. Not only are costs enormously great for the doctor, but taxes are much higher. But more important is the responsibility of doing the job properly in the context of contemporary medical and surgical practice. The last 20 years has seen as profound a change in medicine on its scientific side as that which followed Pasteur's discovery 100 years ago. You know yourselves how tremendously the therapeutic effectiveness of drugs has altered in a short span of time to the point now where many drugs carry as great danger, unless carefully and skilfully exhibited, as they have the potential for astonishing benefits.

These changes demand a much closer attention to the patient than an honorary system can possibly give—to the point where almost daily visiting has become necessary—and, I might add, done by many honoraries at very considerable cost to themselves. There are many other reasons why, in my opinion, and that of many other honoraries, the system is outmoded. And this brings us to the other aspect of an honorary's function—that of teaching and research. There is rarely time for the latter, except in a minor and usually dillettante way, nor are there the facilities which are only provided for the full-time researcher in our teaching hospitals. As to teaching itself, again time and continuity are against us. Such is the extraordinary tempo of change and progress that more and more teachers, except in their own specialities, narrow perforce in scope, are falling behind, and are forced to live on their

intellectual capital. They cannot do otherwise because they have not the time to keep abreast of change. I do not think it is generally realised by the community they serve that not only are the services of the honoraries given for no monetary reward, but that they carry the main burden of clinical teaching in the last three years of a medical student's training—this also without recompense. Several years ago I sat on a committee of the Melbourne University Faculty of Medicine to try and assess the annual value of this teaching for the University—and unpaid for. We arrived at a figure of approximately £150,000 per annum.

I am, of course, not implying that there are no advantages from the honorary system to the doctor, as well as clearly there are for the patient. But it is foolish to try and maintain a system the disadvantages of which far outweigh the good points, and which clearly is an obstructive force against progress. I have the support here of the President of the Royal College of Physicians, Sir Robert Platt, who has designated the honorary system as "effete."

As you know, we have this year started a new University in the State and with it a new medical school. It is my earnest hope that we shall see the end of the honorary system in the hospitals with which we shall be affiliated—that the consultants will be paid for their services for patient-care and teaching, so that they will be able to devote far more time to the hospital to their own advantage and clearly, as a result, to that of their patients and students.

I have mentioned earlier the three aspects—patient care, research and teaching, and this has led us to some consideration of all three, which are, as I said, mutually dependent. I should like next to consider some aspects of research as I see it. An important axiom about research can best be stated by quoting Ingle: "The most important and complex instrument employed in research is man himself." I'm sure this fundamental truth is often lost sight of by those who have an interest in medical research, and who of us haven't, because most of us have benefited directly or indirectly as a result?



Miss Jill Duncan receives her certificate

Many think that the important problem of health can be readily solved by providing sufficient money. Money is, of course, the sinews of war on disease, but it must be wisely spent and properly directed. A great deal of research in this country would be much more fruitful; there would be less overlap of programmes and better inter-communication of results if there were some central expert guidance to the solving of the community's main health problems. Too often money raised is the result of haphazard sentiment, instead of organised

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VICTORIA—Continued

planning, which would make the best men available for special problems. Such a plan has already been advocated, only to be met by the silences of Canberra. Not only money, the right men and some central planning are required, but also a factor too seldom understood—i.e., time. Some people think that if you make nine women pregnant you can produce a baby in one month. By time I mean not only many months or years sometimes, but the necessity for preliminary or complementary basic research on aspects of a problem which at first sight may seem relatively unrelated. After all the final solution of the polio problem was partly the end result of research, much of it done by Burnet and his co-workers in Melbourne. They developed the method by which viruses could be grown in large amounts—ultimately leading to tissue cultures, which in turn led to an effective vaccine.

My last topic relates to the problem of teaching in medicine. This has become my main interest in the last six months, since joining the Monash staff, and again I can aptly quote my title, because here again education in the community is not an isolated phenomenon, but one and indivisible. Apart from the inevitable experiences of childhood and student days, when on the receiving end, my first constructive thinking about education occurred in my last year at school, which was the first year of the depression. The essay prize that year was set on the subject, "What means would best save the world from economic disaster?" You recognise immediately a theme which school children revel in because they know all the answers to simple problems. I too knew the answer. I suppose anyone would have got 20 or 30 to 1 against me before the competition, as there were several red hot favourites at about even money, including the present Master of Worcester College in Oxford. My theme was a very simple one—economic problems arise mainly from ignorance; ignorance can be overcome by education; education, being so important, requires the best brains in the community; the best brains can only be obtained by high payment. Treble all schoolmasters' salaries and the world would be freed from want and made safe for democracy. You will not be surprised to hear that I romped in and made a handsome profit. No schoolmaster judging these essays could possibly resist my argument. But strangely enough I'm becoming more convinced as I become older and stupider that there is a grain of sense in this argument. I am deeply interested in our educational system because of the job I now do as Dean of Medicine, and I am naturally concerned in the standard of education which students have received before they come to the University, because on this rests to no small extent whether they will pass or belong to the appallingly large 40-60 per cent. who fail in their first year. Now it is not generally known in the community that there are two standards of education, if not three, and that each has its own failure and success rate at the University. I refer to private schools, the State schools and the Roman Catholic schools. Some years ago a careful study was made of failure rates in first-year medicine by Hohne at Melbourne University. He found the following startling results—that the students matriculating from non-Catholic private schools performed markedly better than those from State schools, and both of these performed significantly better than did the students from Roman Catholic schools. No doubt there are many factors, many of them difficult to assess, but these facts were indisputable. Subsequent research at Melbourne University has shown that precisely the same differential trends have continued to the present time.

When we try to determine what are some of the causes, one factor appears highly significant—the ratio of staff to students in different schools. In Victoria these ratios are for non-Catholic private schools, one teacher for 18 pupils; for State schools, one teacher

for 34 pupils, and for Roman Catholic schools, one teacher for 46 pupils. Another probably significant factor is that in Roman Catholic schools only about 12 out of 100 stay at school until the age of 17, while in private schools 40 out of 100 stay till that age.

Now this clearly means that the State is tolerating, and has tolerated for years, a system of education manifestly unfair to a large section of the community. One is conscious that effective education of every child is an important part of the intellectual, technical and cultural resources of our country and we cannot afford the second rate here. I am not attempting to argue the justice or otherwise of State aid for Roman Catholic schools, but it is only proper to point out that one clear reason for the relative academic failure of these schools has its roots in the fact that they labour under an intolerable financial burden which denies them the opportunity of equality in education. If our Universities are to make the contribution they should to the Commonwealth, the material they must work on should have as high an educational standard as possible. For about 20-25 per cent. of the community this will never be possible with the present system and with the increasing cost and complexity of education it will become less possible until financial relief is given. I think I can say with fairness that this opinion, which I was delighted to see recently was supported by Dr. Darling, the headmaster of my old school, owes nothing to religious bias, training or belief, but is sincerely held as the result of a serious attempt to understand some of the problems which face all concerned in one of the most vital tasks of the community—that of education.

I would be the first to agree that in any of the changes I have touched on in our medical or educational practices, we should take care that the baby is not thrown



Society President (Mr. Johnson) congratulates Allan Hibberd on qualifying for Fellowship

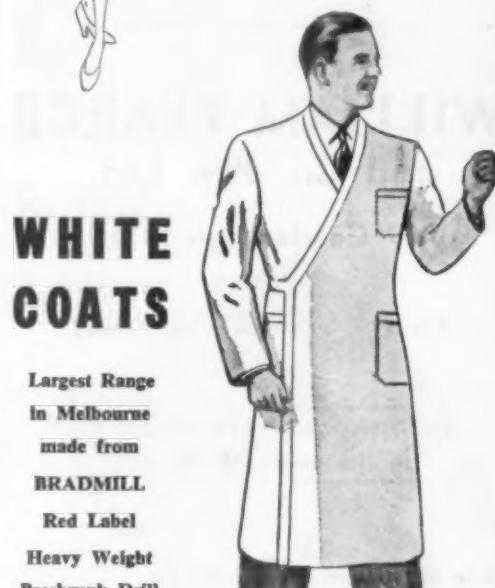
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VICTORIA—Continued

out with the bath water. Rather more elegantly expressed are Walshe's words on this point, "The art of progress is to preserve order amid change and change amid order."

I hope I have given a few of you the satisfaction of being in agreement with some of the points of view I have expressed tonight. I feel sure that some others among you have had the even greater satisfaction of angrily disagreeing with everything I have said. As a physician I am strongly in favour of occasional excesses of emotion brought about by sincere attachment to a cause or alternatively by violent disagreement with it.

What is deplorable is apathetic acceptance of the status quo, because we are too timid, or too stupid, to realise that without change only stagnation can result.

Now you have become members of a profession which clearly is alive to its responsibilities and exploring very seriously the ways and means of further improvements in the training and education of students, it is necessary you should realise that some of the problems I have considered tonight might well touch you directly or indirectly. We cannot live in isolation either as individuals in the community nor as members of sister professions. I cannot conclude more aptly, I feel, than to quote some other lines of John Donne, who has given me the title for this address: "Send not to know for whom the bell tolls; it tolls for thee."

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Victoria met at the College of Pharmacy, 381 Royal Parade, Parkville, on July 12, at 10 a.m.

Present.—Messrs. N. C. Manning, S. J. Baird, H. A. Braithwaite, A. W. Callister, K. E. Hartley, W. R. Iliffe, W. Wishart, Registrar, Deputy Registrar, and Minutes Secretary.

Correspondence.—A precis of correspondence, which had been circulated to members before the meeting, was considered. This included the following items:

To the Police Drug Bureau, inquiring what action, if any, had been taken concerning the failure of a doctor to supply written prescriptions to a chemist who had been involved in court proceedings.

To a College student, indicating the number of practical exercises to be written up in a notebook, the original practical work book having been lost.

From a student who had completed a year of science studies in the university of another State, inquiring what concessions would be available to him in Victoria.

It was resolved that this student be informed that he be exempted from the first year of the course with the exception of the subject Pharmaceutics I.

The President said he felt that they should lay down a rule that a person who had successfully completed a first year science course in an Australian university in the subjects of the first year of the pharmacy course should be exempted and accepted for admission to the second year conditionally upon taking Pharmaceutics I concurrently. The Board agreed.

From Inspector DeLany asking for the services of a lecturer to speak on the Poisons and Dangerous Drugs Regulations at the next Detective Training School in August. It was agreed that Mr. H. A. Braithwaite should be asked to undertake this task. Inspector DeLany, in his letter, spoke appreciatively of Mr. Braithwaite's services at previous schools.

From a prospective student, submitting details of the Matriculation examination completed by him in Western

Australia. It was resolved that this be accepted as complying with the entrance requirements for the Victorian course.

Formal Business.—The following formal business was transacted:

Registration.—Application for registration from the following were approved: Ann Janet Kennedy (Gt. Br.), Ray Athol Taylor (S.A.), Angela Mary Hunt (Gt. Br.), Gertrude Hastings (Gt. Br.).

Erasures from Register (by Death).—Wemyss Alexander Gordon, Percival James Denny Preston.

Names Retired to Register.—Wilson Parkinson, Grace Winifred Williams (Mrs. Nicholls).

Dangerous Drugs Licences.—Hospitals, nil; wholesalers, nil; manufacturers, nil.

Certificates of Identity Issued.—To Great Britain, 1; Queensland, 2; South Australia, 1.

Notification of Relievers.—29.

Notification of Managers.—7.

Poisonings Reported.—Arsenical Weedkiller, 1 fatal, 1 non-fatal; Chlordane, 1 fatal; Barbiturate, 1 non-fatal; Barbiturate and Codeine, 1 non-fatal; Potassium Bromide, 1 non-fatal.

Poison Containers (Plastic).—Models of a suggested new design for a poisons container in plastic material were submitted by the Plastics Institute of Australia for inspection by the Board.

The President said these had been produced following discussions with representatives of the Institute. It was obvious that the widespread introduction of plastic containers necessitated some review of the Poisons Regulations, which laid down specifications only for glass bottles, tins, etc. The Board after examination of the models submitted, resolved that the Institute be advised that their opinion of the design was favourable and pointing out that provision for the acceptance of such containers could be made by an amendment of Regulations.

Examination Syllabuses for 1962.—Copies of examination syllabuses for the third year full-time course to be introduced in 1962 as submitted by the Dean were tabled.

The President said that he had discussed this with the Dean of the College, and had made one or two suggestions for minor alterations. He had not as yet received the Dean's comments on his suggestions.

A sub-committee of the Board was appointed to peruse the final draft, and subject to their acceptance it was agreed that the syllabuses be adopted.

Entrance Examination—Mathematics as a Pre-requisite.—Further discussion took place on the question of requiring mathematics at Matriculation level as a pre-requisite for entry to the pharmacy course. The President said there were some conflicting views on the proposal, and that at his suggestion certain data was being sought from leading authorities in the educational world. It was agreed that further consideration be given at the next meeting.

Breaches of Regulations.—A number of breaches of the Pharmacy Regulations by a country chemist were reported by an Inspector of the Board. It was resolved that the chemist concerned be asked to appear before the Board at its next meeting.

Amending Poisons Bill.—A progress report on the preparation and revision of the amending Poisons Bill, which has been in the hands of the Parliamentary Draftsmen for some time, was submitted.

The meeting adjourned at 1 p.m. until 2.15 p.m., when the Board proceeded with the prosecution and conviction of a pharmaceutical chemist.

The chemist concerned had been convicted on a number of charges laid by the Police Department. After hearing the evidence of the police and an Inspector of the Board and of the chemist concerned, the Board resolved that he be admonished and ordered to pay the costs of the inquiry.

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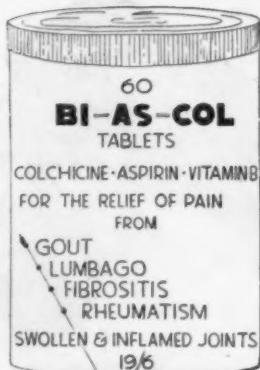
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VICTORIA—Continued

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Victoria met at the College of Pharmacy, Parkville, on July 5, at 9.30 a.m.

Present.—Mr. F. W. Johnson (President) in the chair, Mrs. P. A. Crawford, Messrs. S. J. Baird, A. L. Hull, A. I. K. Lloyd, L. Long, C. B. Macgibbon, K. Ramsay, C. P. A. Taylor, G. K. Treleaven, F. C. Kent (Secretary), T. G. Allen (Minutes Secretary), and R. H. Borowski (Assistant Secretary).

Radio Isotopes Course.—The Secretary reported that he had been in touch with the Director of the Commonwealth X-Ray and Radium Laboratory, who had returned from abroad and had stated that arrangements for a second course of instruction for pharmaceutical chemists were proceeding.

Model Pharmacy.—Mr. Ramsay, Acting Chairman of the Education Committee, reported that the question of equipping and operating the Model Pharmacy had been considered at a meeting of the Education Committee and a report would be submitted to the Council.

Lecture by Dr. Vaughan.—The President said that an extraordinary lecture had been delivered by Dr. Vaughan to members of the Society during the month. The lecture was well attended, but it was unfortunate that a greater number of older members of the Society were not present.

Correspondence.—Formal correspondence was tabled and the letters considered included the following:—

From the Victorian Students' Association, expressing thanks for the Council's action in supplying furniture for the Student Council Room.

To the Commissioner of Land Tax, requesting consideration of exemption of College from payment of land tax.

To a country member, drawing attention to an article on the Metric System, written by him and published in the official Journal of the Chamber of Manufactures.

To Major-General Alan Ramsay, congratulating him on the knighthood conferred by the Queen.

From Mr. George Todd, late commissioner at the College, expressing thanks for gifts on his retirement.

From a number of country chemists, requesting information and literature for use at "Career Nights."

From the Student Council, informing the Council of their intention to form a number of clubs and societies within the College. The Council expressed its approval and instructed the Secretary to assure the Student Association of its interest and encouragement in this direction.

From Mrs. W. A. Gordon, Leeton, N.S.W., notifying the death of her husband, Mr. Wemyss A. Gordon. The Secretary said the sympathy of the Society had been conveyed to Mrs. Gordon. Mr. Gordon was a Life Member of the Society of very long standing. He had been apprenticed, towards the end of the 19th century, to a Mr. Hirst, Spencer Street, Melbourne. The Secretary was seeking further details for an obituary notice.

NEW Members Elected:

Full Members.—Rosemary Ann Balmer, Peter James Harper, William Anthony Pearson, John William Barry Richards.

Transfer from Apprentice Members.—John Alfred Lee, Graeme Frank Miller.

Student Members.—Susan Maree Barker, Susan Currie, Leonie Doris Haines, Garry Robert Ireland, Ian Russell Robinson, Wendy Grant Whitfeld.

Dispensing of Eye Drops.—The Secretary read a letter from Mr. Sydney Hull, concerning the dispensing of eye drops. Considerable discussion took place following the reading of this letter. Mr. A. I. K. Lloyd expressed the view that eye drops should always be dispensed in sterile condition. Mr. A. L. Hull pointed out that the A.P.F. Committee had gone into this matter very thoroughly. The Council resolved that the matter be referred to the Department of Pharmaceutics and the A.P.F. Committee for report.

Mr. Treleaven drew attention to an article published in "The Medical Journal of Australia," June 24, under the heading, "The Necessity for the Supply of Sterile Ophthalmic Drops by the National Health Service."—In further discussion the view was expressed that the principle which should be adopted was that the safe dispensing of eye drops transcended any consideration on the commercial side as far as pharmacy was concerned. It was resolved that this viewpoint be communicated with the Guild.

Unveiling of Mural.—The President reported that Mr. L. Annois had intimated that the mural in the Assembly Hall would be completed within the next month. It was necessary that consideration be given to the unveiling or other ceremony which should take place upon completion of the work. It was resolved that the Social Committee be called together and report any proposals to the Council.

Education Committee.—Mr. Ramsay reported on a meeting of the Education Committee held on June 21. Matters considered include the arrangements for the introduction of the Course in Pharmaceutical Merchandising to be introduced into the curriculum in 1962.

It was necessary now to consider the proposed course in greater detail and a sub-committee consisting of the Chairman and Messrs. Hull, Johnson and Lloyd had been appointed to discuss the details with Mr. Bedford. The Committee considered also a second course in the handling of radio isotopes and had advised that arrangements were proceeding satisfactorily.

Consideration had also been given to operation of the Model Pharmacy, and the Committee recommended that the Model Pharmacy be brought into use in 1962 for the training of third-year students, under the direction of the Pharmaceutics Department.

Active stimulation in the interest of granting of scholarships for the Pharmacy Course was considered and certain suggestions in regard to this matter were proposed.

After some discussion the report was adopted on the motion of Mr. Ramsay, seconded by Mr. Hull.

The Secretary brought to the notice of the Council a communication from the Repatriation Department in regard to proposed scholarships, and it was resolved that certain aspects of this question which had been raised in regard to practical training should be discussed with the Pharmacy Board.

Syllabus for 1962.—A draft Syllabus for the Third Year Course for the year 1962 was tabled. The Secretary said this had been submitted by the Dean and copies had been sent to the Council members. It was resolved that the draft be discussed with the Pharmacy Board and the Education Committee, in conjunction with the Dean.

Financial.—The Hon. Treasurer submitted the monthly financial statement and accounts totalling £8608/19/5 were passed for payment.

Inspection Night.—Mr. Treleaven reported that he had sent to the Secretary a circular prepared by the Pharmaceutics Department. This set out details of arrangements for the inspection of the Pharmaceutics Laboratory in operation. The Council suggested August 2 as an appropriate date and approved of the arrangements generally. The President said it was proposed that invitations be extended to members of the Pharmacy Board, members of the Council and a number of other

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VICTORIA—Continued

persons. The object was to provide an opportunity for members of the official bodies to see at first hand the pharmaceutics practical classes at work under the new full-time syllabus.

Illness of Mr. J. S. R. Barker.—Mr. Johnson reported that Mr. J. S. R. Barker had been in hospital for a severe operation. He and the Secretary had called on him and were pleased to report that he was getting on quite well. He asked that he might be remembered to former colleagues on the Council.

Tutorial Classes.—A request had been received for the setting up of tutorial classes for First and Second Year students. The Secretary said that the suggestion had been referred to the Dean, who had submitted his comments. It was resolved that the Council, while not unsympathetic, was unable to meet the request because of insufficient staff and resources.

THE P.D.L.

Directors' Meeting

The 433rd meeting of the Directors of Pharmaceutical Defence Limited was held at 18 Saint Francis Street, Melbourne, on July 19, at 10 a.m.

Present.—Mr. E. W. Braithwaite (Chairman), Messrs. I. H. Barnes, W. J. Cornell, D. A. Lees, J. W. Pollock and T. G. Allen (Secretary).

Correspondence.—Formal correspondence was tabled, and the following were amongst the letters dealt with:

To Australian Decimal Research Organisation, cancelling subscription.

To the Pharmaceutical Society of Victoria, forwarding for information a copy of the latest "Ethical Code of the Australian Society of Accountants." Acknowledged with thanks.

A resident of New South Wales wrote in reference to a P.D.L. Group Assurance policy with the M.L.C., taken out by her brother, who had recently suffered an accident and would be incapacitated for some time. Letter of sympathy forwarded and details placed before M.L.C. to advise the policyholder the surrender value and other details of his policy, which was some years in arrears as regards premium payments.

From Mr. John L. Walter, notifying change of address of the South Australian Branch Office to 403 Brighton Road, Brighton, S.A.

To the Secretary of the Victorian Branch of the Guild, returning corrected proof of the "Notes for Relieving Pharmacists," and expressing thanks for the co-operation of the Guild in this matter. The Directors' suggestion that this was a service that might appeal to members in all States had been passed on to the Victorian Branch with the thought that it might be placed before the Federal Council of the Guild.

The correspondence was received.

New Members Elected.—Messrs. Donald W. Allen, Bendigo; Ian A. Donald, Geelong; Graeme F. Miller, Norlane; Peter R. McKee, Horsham; Ian H. Ramsay, Mildura and Ian G. Watson (relieving).

Legal Advice.—Questions turning upon the interpretation of a clause in a contract of sale were submitted by a member, and the solicitor's advice was forwarded to him.

Claims.—Two minor matters under notice at the June meeting were still incomplete.

A substantial claim against a non-member was reported.



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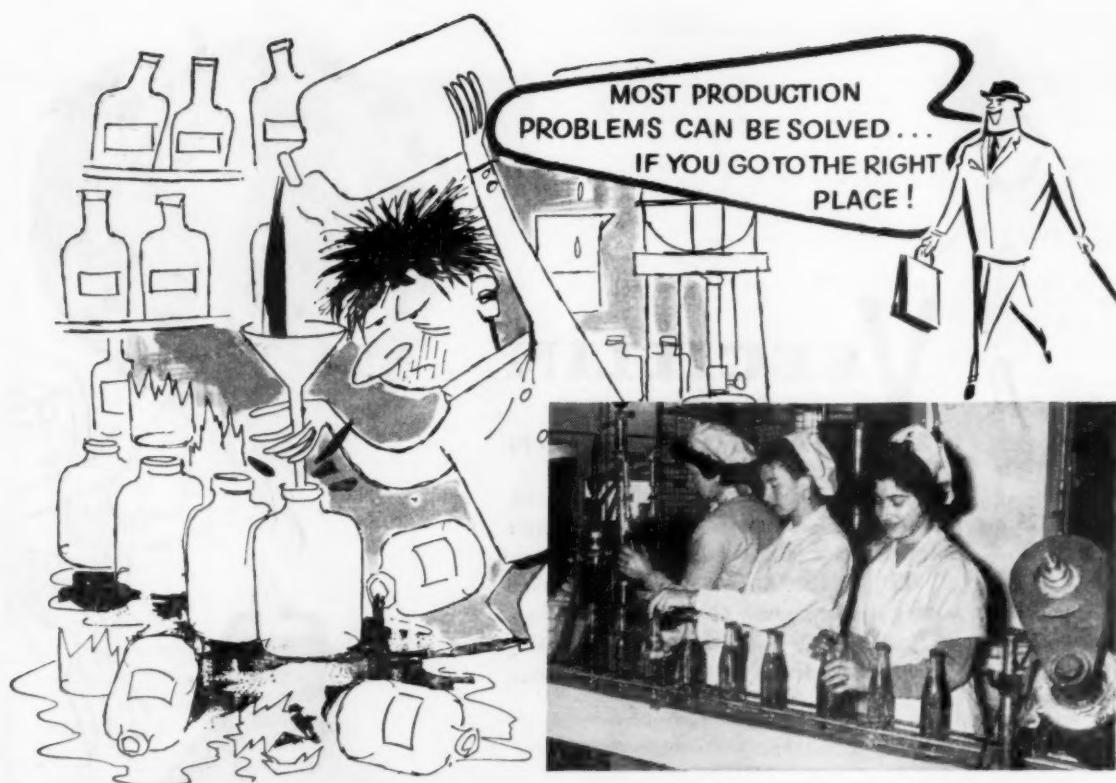
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VICTORIA—Continued

Membership Drive In Some States.—The draft letter to non-members and covering communication to the Branch Secretaries in some States were read to the meeting by the Secretary. In view of the short time left before the date of action desired in this matter (August 31), it was agreed that a note of reminder be sent asking the Local Boards addressed to give the Directors some idea of their thoughts on this matter.

Financial.—Accounts totalling £569/2/10 were passed for payment.

C.I. Covers Under £5,000.—Letters showing amounts due for increase of cover to £5,000 were tabled, and all of the Directors present participated in the signing of these letters personally ready to be attached to the relevant renewal notices when despatched to members on September 1, 1961.

The meeting closed at 12.45 p.m.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Victorian Branch of the Guild met at Guild House, 18 St. Francis Street, Melbourne, on July 4, at 8 p.m.

Present.—Mr. N. F. Keith (President) Chairman, Messrs. F. H. Bedford, K. L. C. Davies, J. W. D. Crowley, A. K. Lloyd, J. T. deRavin, C. M. Waters, S. M. Adams, J. K. Gosstray, R. B. Grinlington, G. Carter, G. W. Siebler, H. Marks, A. O. C. Blake, A. W. Cocking, H. C. B. Henshall, H. Shilton, W. L. Hilyard, W. J. Langtry, J. F. Scown, D. L. McColl, Miss R. MacGillivray, Mr. W. J. Wright (Secretary), Miss B. Wilson.

Welcome.—The Chairman welcomed Mr. K. L. C. Davies and Miss Wilson to the meeting.

Correspondence.—From Mrs. E. Scott acknowledging the good wishes of the State Branch Committee.

A letter from the W.A. Branch containing a suggestion relating to the exchange of members at S.B.C. meetings was read. Mr. Lloyd asked that the Executive consider this reply. Mr. Crowley moved that the letter be deferred until next month; seconded by Mr. Lloyd and carried.

The Chairman read a letter addressed by the Salaried Pharmaceutical Chemists' Association to the Minister for Health protesting about the interpretation placed on the Chemists' Award. It was decided that a copy of this letter should be forwarded to S.B.C. members.

A letter from the Department of Health in reply to our inquiry seeking official information on the procedure to follow when it is not possible to obtain a receipt for Benefits was read to the meeting. It was decided that this reply was satisfactory.

A letter of resignation from the State Branch Committee received from Mr. J. T. DeRavin. Mr. DeRavin's resignation was accepted with regret. It was decided to inform Mr. DeRavin accordingly, and to record the sterling service he has given to the State Branch Committee and associated committees.

Federal Report.—Mr. Keith gave the Federal Report. He said there had been a meeting of Federal Council to consider the Guild's attitude to Repatriation. The Federal President at his own request was withdrawn from the negotiating committee for Repatriation, and Council had added Mr. Russell and Mr. Thomas. He mentioned that also on this committee were Mr. Bedford, Mr. L. Allen and Mr. T. B. Evans. He said that Mr. Scott had also been replaced on the N.H.A. Standing Committee by Mr. Russell of South Australia.

Mr. Keith said that following the meeting of Council the Federal Executive had discussed the purchase of a building in Adelaide, the signing up of "Serene" as a Chemist Only contract line with Johnson & Johnson, and a two for one offer which was on the way, which the Committee opposes as it includes a give-away.

Referring again to the letter from the Repatriation Commission to Mr. Scott, Mr. Keith said that Federal Office had asked for views on this from all States, and invited members present to give consideration to a letter to the Federal Secretary as drafted and circulated.

Federal Trade and Commerce Conference.—Mr. Carter was delegated to examine the agenda and report to the next meeting.

District Reports.—Mr. Cocking submitted a remit from District No. 22, and moved that Repatriation dispensing fees be published. The motion was seconded by Mr. Waters. Mr. Crowley moved an amendment that members be given examples of the current fees received from Repatriation, e.g., ready prepared items, extemporaneous 8 oz. mixture containing solids, with heading "out of date." The amendment was seconded by Mr. Adams and carried, thus becoming the motion. The motion was carried.

Pricing Report.—Mr. Grinlington moved that another column be added to the Patents Price List to show mark-ups by code and indicating C.O. and Guild contract lines by code; the motion was seconded by Mr. Crowley and carried. He reported that the dispensing fee list was to be reissued on stiff paper of foolscap size, punched for the P.P. Cover, and that there were only slight alterations to be made.

Mr. Carter moved that the dispensing fee list be roneoed until new fees are arrived at. After being seconded by Mr. Waters the motion was discussed, and it was agreed that the list should be printed as previously decided.

The question of films left uncollected was raised, and it was suggested that consideration should be given to making a deposit as has recently been introduced in N.S.W. It was decided that this matter be deferred till the General Meeting to be held on July 24.

Mr. Grinlington raised the matter of the price of Weat Harts, and after discussion Mr. Crowley moved that the correct price be left in the price list and indication be given that the price is cut in other outlets; the motion was seconded by Mr. Henshall and carried.

The Gamma Laboratories' post-card was produced, and it was decided to lodge a complaint with the company through Federal Office that prices were notified by post on an open card.

Returning Officer's Report.—The Returning Officer (Mr. S. M. Adams) reported that he had counted the ballot papers from District No. 2b in the presence of the scrutineers for the nominees, Mr. Henshall and Mr. Scown, and that Mr. S. Gandofo received the greater number of votes.

Mr. Adams moved that the closing date for nominations for office-bearers of the Branch be 12 noon on July 26. The motion was seconded and carried.

New Members Elected.—Mrs. C. A. Hunt, Mornington; Messrs. I. L. Mills, Mentone; P. E. Williamson, Yarraville; G. F. Miller, Norlane; P. R. McKee, Horsham; J. R. Shannon, Coburg; and K. Fitzsimon, Fawkner.

Re-entered.—Messrs. E. H. Baker, Cobden, and W. C. West, Parkdale.

Lectures at College.—On Mr. Davies' motion, seconded by Mr. Henshall, the Committee expressed appreciation to those S.B.C. members who were lecturing at the College of Pharmacy.

Y-Cough.—It was decided to draw the Federal Secretary's attention to the advertisements on television featuring this product.

The meeting closed at 11.20 p.m.



QUEENSLAND

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in Queensland, Miss D. Brighouse, 'phone B 8407.

Mr. R. A. Ebnetter has purchased the pharmacy of Mr. T. F. Hiscock at Barolin Street, Bundaberg.

After being in business for some years at Ipswich, Mr. F. V. Kunze has sold his pharmacy to Mr. Tony Porter, formerly of New South Wales.

Mr. K. D. Reynolds, of Mt. Gravatt, has opened a branch pharmacy at 55 Lumley Street, Upper Mt. Gravatt.

FINAL EXAMINATION RESULTS

Eighteen candidates were successful at the Final Examination conducted by the Pharmacy Board during June. Congratulations and good wishes for the future are extended to the successful candidates, namely—

Misses J. Anderson, K. K. Cory, A. A. Delahunt, M. F. Hayes, P. M. Hickey, J. St.C. Matheson, E. C. Nowotny, B. A. W. Taylor, M. M. White.

Messrs. K. E. Auld, B. N. Ellemor, P. J. Evert, T. C. Hope, N. E. Kilduff, J. A. W. Shay, R. J. Teys, R. D. Uhlmann, J. H. West.

Eighteen Posts were granted and the following students qualified for Post examinations:

Mrs. M. H. Rush, Mrs. L. Sibbles, Misses R. T. Barham, N. Machin, L. W. Oliver, D. G. Jeffery, Messrs. L. R. Papi, M. J. Fraser, R. L. James, L. Barr-David, J. A. Clem, J. C. Connors, J. B. Fry, R. J. Hawton, K. F. Horgan, M. M. Irving, M. G. Witham, B. R. H. Woods.

CENTRAL QUEENSLAND BRANCH OF THE PHARMACEUTICAL SOCIETY

We are grateful to Mr. A. F. Sherlock, who has been appointed Public Relations Officer for the newly formed Branch, in making this report available.

The third annual meeting of the Rockhampton and District Pharmaceutical Discussion Group was held in Rockhampton on June 21. At this meeting those pharmacists present unanimously agreed to form the Central Queensland Branch of the Pharmaceutical Society, from the original Discussion Group.

Those present at the inaugural meeting were Mrs. M. J. Fraser, Messrs. H. P. Fitzpatrick, D. Sullivan, K. Brumm, B. Bryant, C. Daly, G. Dwyer, M. Williamson, A. Power, H. Gill, J. Grayson, J. Boreham, R. H. Fitzpatrick, K. L. Nash, A. F. Sherlock.

Nominations for office-bearers were called for earlier, by post, and they were received in favour of—

President: Mr. R. H. Fitzpatrick. (Mr. Fitzpatrick will also hold the position of Country Councillor to the Pharmaceutical Society of Queensland, as allowed

by a recent change in the constitution of the latter body.)

Secretary: Mrs. M. J. Fraser.

Treasurer: Mr. K. L. Nash.

Public Relations Officer: Mr. A. F. Sherlock.

Journal Readers for the ensuing year were also elected. Mr. M. Williamson and Mr. K. Brumm will report on "The Medical Journal of Australia," and Mr. B. Bryant on "The Australasian Journal of Pharmacy."

It was decided that the activities of the Discussion Group be continued, with the object of promoting the ethical and educational aspects of the profession. Thus members will continue to have the opportunity of hearing guest speakers from the medical and allied professions, and of viewing the screening of films of pharmaceutical interest. There will also be reports by appointed readers of professional journals, and discussions and debates on subjects of an ethical and professional nature.

A feature of the evening was the screening of two highly interesting films, loaned by Lederle Laboratories—"The Smallest Foe"—pertaining to virus research and Milton.

The next meeting of the Branch will be held on August 25. A feature of this meeting will be a debate, the subject being "That there be a Universal, visual system of Tablet Identification."

ENGAGEMENTS

Engagements of pharmaceutical interest announced during the month included—

Mr. N. C. Patrick, whose fiancee is Miss Robin Allingham of Bardon.

Mr. Paul Kingsford, who has announced his engagement to Miss Patricia Eaves of Clayfield.

Mr. J. J. Gardiner of Newmarket has announced his engagement to Miss Paula Steptoe of Tully.

Mr. Alan Rae of Camp Hill announced his engagement to Miss Janice Lusk of Mitchelton.

Mr. I. T. Perren of Nambour, whose fiancee is Miss Estelle McKewen also of Nambour.

WEDDINGS

Two pharmacists were married on July 15 at St. Mary's Church of England at Kangaroo Point. They were Miss Lyn Craig of Wynnum and Mr. Wal Williams of Ashgrove. Three pharmacists were also members of the bridal party—Miss Alison Hoffman, chief bridesmaid, Mr. Glynn Bodimeade, best man, and Mr. Ron Scott, groomsman. The bride and bridegroom set out on a caravanning honeymoon. It is their plan to tour around Australia, taking some months, during which time they plan to undertake relieving work.

On July 15 at St. David's Church, Allora, the marriage took place of Mr. D. A. E. Cunningham, whose bride was Miss Dorothy Elizabeth Shooter, of Ellthorpe.

Congratulations and best wishes for the future!

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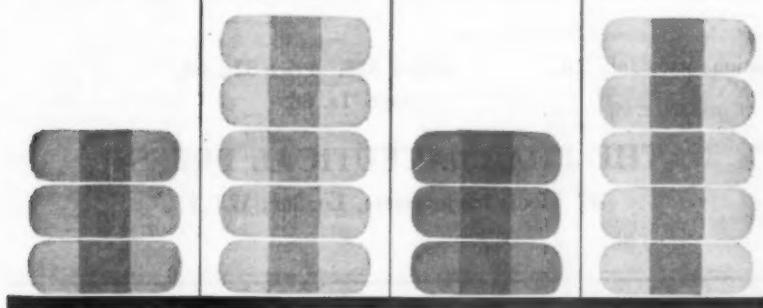
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QUEENSLAND—Continued

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Queensland Branch of the Guild met at Drysdale's Chambers, 4 Wickham Street, Brisbane, on July 6, at 7.45 p.m.

Attendance.—Mr. C. A. Nichol (President), Messrs. M. Armstrong, A. Bell, H. Darrouzet, J. J. Delahunt, A. W. Eberhardt, R. M. McCawley, A. M. McFarlane, F. H. Phillips, R. M. Ward, and the Secretary.

Trading Hours in the Brisbane Area.—The President reported that 244 members had received the questionnaire on June 29. Mr. Nichol said July 14 was the date set for the closing of the questionnaire. The Executive would examine these replies prior to the August meeting so that it could make a recommendation at that meeting. It might be necessary to send a follow-up questionnaire to those who had not replied by July 14.

Visit of Parke, Davis Executives to the Six Northern Zones.—Mr. Delahunt reported that on July 5 he had received a 'phone call from Mr. F. W. Ritchie advising that he would be pleased to accept the Committee's invitation to be guest speaker at the Annual Meeting on August 29. Mr. Delahunt said Mr. Ritchie had told him he was very pleased with the visit he made to the north, and he spoke very highly of the organisation which had been done by the Guild Office to ensure the success of his visit, and of the co-operation he had received from the zone officers in the various zones visited.

New Members Elected.—Mr. R. A. Ebneter, Bunderberg; Mr. L. R. Cadzoe, Wandoan; and Mr. D. E. Mullen, Bribie Island.

Branch Pharmacy.—Mr. K. D. Reynolds, Upper Mt. Gravatt.

Correspondence.—To Mr. T. J. White, General Manager, Parke, Davis & Co., conveying through him to his company the sincere appreciation of the President and members of the Guild Committee in making Mr. Ritchie's services available for Guild visitations. A similar message had been conveyed to Mr. F. W. Ritchie, Sales Manager of Parke, Davis & Co., when extending an invitation for him to be guest speaker at the 33rd Annual Meeting of this Branch to be held on Tuesday, August 29. Mr. Ritchie had replied accepting this invitation.

From Victorian Branch of the Guild on the subject of closer contact between the State Branch Committees of the various States. Victoria would be glad to have the opinions of the various State Branch Committees on the value of an interchange of interstate observers to attend by invitation an occasional S.B.C. meeting. Mr. Nichol said he thought the idea had some merit, but it was a matter of time and expense. Mr. Delahunt said he felt an interchange of members of the Committee in various States could perhaps foster a greater knowledge between the States of the opinions of the various representatives, but he did not know how this could be absorbed by an occasional visit. Federal Council was the body on which all States were represented.

Members of the Committee thought this suggestion had quite a lot of merit, and it was decided to let it stand on the table for another month for further discussion at the August meeting.

Letters of appreciation from William R. Warner & Co., Frederick Stearns & Co., and R. M. Creighton Pty. Ltd., expressing appreciation of the Guild's Cold War Campaign featuring winter remedies. Several members expressed the view that the Cold War Campaign for winter remedies was the best all-round promotion to date.

Guild Merchandising Section forwarding agenda for the Federal Trade and Commerce Conference to be held in Melbourne on August 7 and 8. Mr. Nichol said this would be issued before next meeting so that full consideration could be given to the agenda, and Mr. Delahunt, who will be representing Queensland, advised accordingly.

Bulletin from the President of the Pharmaceutical Association, Mr. H. A. Braithwaite.

Retail Pricing.—Mr. Ward said he had been through the book and marked off all the lines that he felt were not now used. He had sent the book to D.H.A. for a further check.

Mr. McFarlane said these alterations will take effect with the new list. Another suggestion was that the letters of the alphabet be printed just $\frac{1}{4}$ in. inside the margin so that members could pick at a glance the letter wanted.

Liaison Committee Meeting.—Mr. Nichol said the report of the meeting held on June 26 was tabled. A copy of this meeting report was available to each one for perusal.

Repatriation Dispensing.—Mr. Nichol said it was felt that before any advice was sent from this office there should be a communication from the Guild federally to all members, and he personally was of the opinion that as State President he had also to give backing to the letter from Federal Office. This he had done. Mr. Nichol said that there had been quite a number of calls at the office and to him personally concerning the new procedure. Some members were still asking about the new Form 12. Any member who read the intimation from the Repatriation Department should know what the form is and should have received several copies with the original advice.

Mr. Bell said he thought it would be wise to follow up with another letter to members from this office concerning Repatriation Pricing.

Mr. Armstrong said he agreed with this suggestion. He felt attention should also be drawn to the fact that each one all along has been paying $2\frac{1}{2}$ per cent. to the Guild for pricing.

Mr. Nichol said he thought this was a good suggestion.

It was also recommended that two fairly stiff manilla envelopes addressed to the Guild Pricing Bureau, 199 Clarence Street, Sydney, be made available to all members so that they could place their Repatriation prescriptions in the envelopes and forward direct to Sydney.

Federal Council Meeting.—Mr. Nichol reported on the special Federal Council Meeting held in Melbourne, which Mr. Martin and he attended during the month. At this meeting it was agreed if possible that deputations from the Guild should wait on Ministers concerning the National Health Act. Mr. Tennyson of the Public Relations Secretariat will keep the Guild briefed. It is here that Queensland Branch will have to make contact with its members in the various Commonwealth Electorates throughout the State alerting them of the position and expressing the hope that later on they will be able to arrange a deputation with their local M.H.R. Mr. Nichol said as far as the Greater Brisbane area was concerned it might be necessary to arrange a meeting in the Guild's rooms so that the Brisbane chemists could get together and discuss the approach and then interview their local M.H.R.'s.

Mr. Nichol reported that the Annual Subscription had been increased, on a ballot being taken amongst members, to £15/15/- per year from July 1. Branch Recording Fees had been increased from £2/2/- to £3/3/- per year.

Mr. Nichol advised that the Federal President, Mr. Scott, would be overseas until the end of October. During his absence Mr. Dallimore, of Perth, would be Deputy Federal President. Mr. Norman Keith, Victorian

QUEENSLAND—Continued

President, had been elected to the Federal Executive during Mr. Scott's absence.

Merchandising and Publicity.—Mr. Delahunty said he felt the present "Cold War" advertising campaign was possibly the best promotion to date. Letters had been coming in from manufacturers offering their congratulations. One of the main factors contributing to the success of the campaign had been the wholesalers' cooperation. The advertising agency had also rendered great assistance and combined with the Guild everyone had done their utmost to stimulate the chemist's interests.

Mr. Delahunty said he was going to suggest that it was time this Branch had a State Conference. When the Guild was launching the Merchandising and Publicity Scheme it brought representatives to Brisbane from all Guild Zones. He would leave this thought with members for their consideration. He said manufacturers could be approached to provide addresses and interesting discussions linked up with a programme that could be brought forward by the Guild advertising agency.

Mr. Darrouzet said he wholeheartedly supported the idea. The President said he felt the idea had a lot of merit, and he asked members to give this some thought over the coming months.

Mr. Delahunty reported that on July 7 Mr. Nichol and he would be conferring with the Advertising Agency concerning the next promotion in August, which will be "Care of the Hair" promotion.

General Business.—The President recalled that half the Committee would be retiring, but they could all nominate if they wished to do so. He drew attention to the fact that nominations closed on July 21.

The meeting closed at 11.40 p.m.

OVERSEAS NEWS—

(Continued from page 730)

permitted. If a new chemical was used, the onus should be on manufacturers to produce positive evidence of the safety of this additive. One noble Lord said that "if, when we think that we are buying the staff of life, we are actually purchasing 'a chemist's shop,' then we should know that by the label." Baroness Summerskill, herself a doctor, demanded that all canned food should be labelled with the date of canning, and the list of ingredients should be stated on all packages of food. The drug manufacturers had been against stating on the containers the contents of proprietary drugs, but, finally, public opinion prevailed. "Would you object if you bought a drug and found it labelled?" she asked. "It is in your interests and that of your family that that should be so. There are many honest manufacturers, but Parliament is not legislating for them; it is legislating for the minority of dishonest people who are prepared to abuse their posers and exploit the public."

In the course of the Government reply it was stated that no chemical that might be dangerous was put on the market without close screening, as thorough as that given to pharmaceutical preparations. Antibiotics were controlled under the Therapeutic Substances Act, 1956, which permitted only one part in 10,000 of a specified antibiotic in pig and poultry feedingstuffs. It was

obligatory that the labels must indicate the amount, and these labels were approved only for feeds for young pigs and poultry for early slaughter. A special committee had been set up to review the use of antibiotics in feedingstuffs. There was no legislation to control the use of hormones, or oestrogens, in feedingstuffs, or by implantation. The Agricultural Research Council had stated in 1959 that the fattening of sheep and cattle was harmless to humans, but the matter had been referred to the Ministry of Health's Standing Committee.

Market Research

Retail chemists have been warned by the National Pharmaceutical Union on the potential dangers of inquiries made by firms asking for information, disguised as market research, about sales of stocks of proprietary medicines. Even manufacturers themselves are not above reproach. Several leading firms have been trying to persuade retail chemists to make available for examination by a trained representative the N.H.S. prescriptions which they have dispensed. Apart from the legal and professional objections of showing prescriptions to unauthorised individuals, the N.P.U. say there are strong economic objections to this practice.

... AND THE YOUNG GIRL CAN SHOW THEM

The incidents related hereunder came to our notice recently, and we feel that if more people were to follow the lead given by the young lady, a daughter of a member of this Chamber, there might not be the need for "stop-start" economic measures.

Recently this young lady, who conducts a pharmacy business in a Melbourne suburb, was approached by a salesman who offered imported face-washers to retail at 1/6 each.

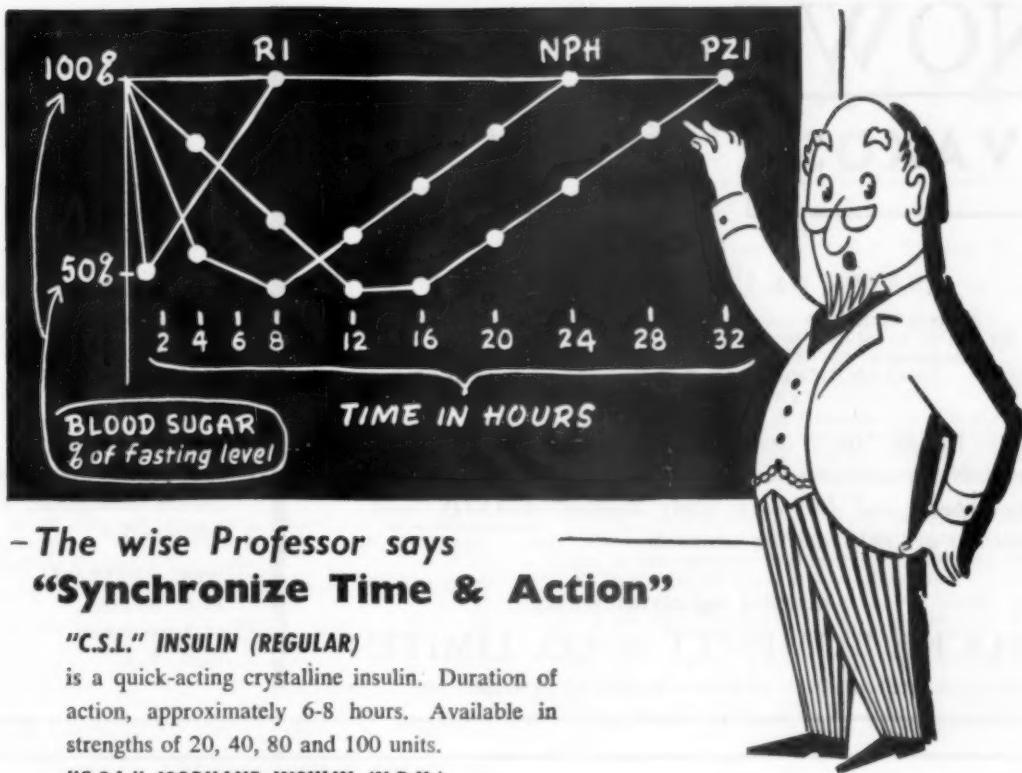
On comparing the offered face-washers with her existing stock of Australian face-washers—which retailed at 2/6 each—she found that the quality of the Australian product was much better than the imported face-washer. In addition she also had strong feelings on the need to support Australian manufacturers. In fact she had been told by her father to always give preference to the Australian product. On these grounds she refused the imported face-washers.

Later that week, a customer asked for a face-washer and she informed the lady that she stocked only Australian face-washers which retailed at 2/6 each. The young lady further informed the customer that whilst she, the customer, could obtain an imported face-washer at 1/6, she felt that, as there were many people in her district out of work from Australian factories, it was not in the best interests of the country for her to stock and sell a product which might result in the dismissal of more Australian factory employees. On having this point of view explained to her, the customer congratulated the chemist on her stand, and promptly bought the Australian face-washer at 2/6.

Again we say that if more retailers were to adopt this attitude there would be less unemployment and less need for economic measures of the type implemented in November last year.

Perhaps manufacturers could do likewise in their purchasing of raw materials.—B.M.T.

—(Extract from Editorial, "Industry Today," Volume 4, Number 4, July, 1961.)



- The wise Professor says
"Synchronize Time & Action"

"C.S.L." INSULIN (REGULAR)

is a quick-acting crystalline insulin. Duration of action, approximately 6-8 hours. Available in strengths of 20, 40, 80 and 100 units.

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contains less protamine and zinc than does Protamine Zinc insulin, and has an action intermediate between that of insulin (Regular) and Protamine Zinc insulin. Duration of action, 16-20 hours. Available in strengths of 40 and 80 units.

"C.S.L." PROTAMINE ZINC INSULIN

a long-acting insulin prepared from pure protamine sulphate and crystalline insulin. Duration of action, approximately 24-28 hours. Available in strengths of 40 and 80 units.

"C.S.L." INSULIN (SPECIAL P.)

prepared from the pancreatic glands of pigs for the treatment of patients showing hypersensitivity to beef insulin. "C.S.L." brand of this product is the only brand obtainable in Australia. Available in 40 unit strength.

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Further information and advice as to the action and use of these insulin products is readily available on request.

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NOW.. full supplies of oral vaccines are readily available

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11/9.7/58



SOUTH AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write details to the Journal Correspondent in S.A. Mr. E. F. Lipsham.

Mr. R. A. Taylor has resigned his position in the pharmacy department of the Royal Adelaide Hospital to take up a similar position in the Hamilton District Hospital in Victoria.

Mr. H. G. Collyer temporarily filled during part of July the vacant management of Mr. A. Lean's branch pharmacy in Harcourt Gardens.

Mrs. B. Oldham has joined the S.A. Register from Victoria.

Mr. R. Maloney visited Maitland early in July (J. & J. Bourne), Naracoorte (Mr. J. Otto) in the earlier weeks of July, and returned to the city to assist Mr. J. Dixon of Glenunga and Mr. J. Watson of Malvern in the latter weeks of the month and the beginning of August.

Mrs. M. Logan visited Murray Bridge at the end of the month to assist Mr. C. Pfeiffer.

Mr. J. Richardson acted during July as manager for Mr. T. Lee.

Mr. John Falconer, now resident in Victoria but formerly of Great Britain, is joining the list of registered pharmacists in South Australia.

Mr. A. C. Holloway has resigned the management of Mr. A. Lean's pharmacy on Marion Road, Harcourt Gardens, and purchased the pharmacy previously conducted by Mrs. Hallewell in Mt. Pleasant. Mrs. Hallewell will return to England.

Mr. R. Callaghan is now managing Carrig-Chemists in Parkholme in place of Mr. G. Bailey, who purchased the original pharmacy in Salisbury last month from Messrs. P. Gryst and M. Callaghan.

Mr. A. W. Wauchope, of Freeling, has moved into new premises in Hanson Street.

Mr. K. Sowry has fulfilled or will carry out in the future weeks the following engagements as relieving manager: In July—Mr. P. Stedman, of Glandore, and Mr. L. Arbin, of Rosefield. In August—Mr. M. Eckersley, King William Street, Adelaide, and Mr. L. Broad, of Hawthorne. In September—Mrs. B. Carroll (C. A. M. Reid), Anzac Highway, Glenelg.

Mr. W. Stoven has been assisting at the Repatriation Hospital, Daw's Road, Springbank, during the current month.

Mr. Elford F. Smith spent the month of July relieving Mr. G. Somerville, of Grote Street, Adelaide.

Mr. K. McKeil has relinquished his position in the Pharmacy Department of the Repatriation Hospital in Springbank, to open a new pharmacy in the Greenacres Shopping Centre.

Mr. D. Skull will spend July, August and September as manager for Mr. W. Taylor, of Whyalla.

During the latter end of June and the beginning of July **Mr. M. Perry** (Q.) visited Cleve on the West Coast as locum for Mr. N. Cumming.

Mr. P. Maloney assisted Mr. R. Tullock, of Teatree Gully, for a few days at the end of June.

Mr. T. Lee has opened a pharmacy in McInerny Avenue, Mitchell Park.

Miss M. Logan assisted Mr. M. Prosser, of Colonel Light Gardens, for the middle weeks of July.

During the past month **Mr. O. Conley** visited Hahndorf to act as locum for Mr. L. Darwin.

Messrs. P. H. and P. J. Grummet have opened a pharmacy on the Main North-East Road at Gillies Plains. Mr. P. Grummet resigned his position with J. White & Son, North Terrace, Adelaide, to manage the new pharmacy.

Mrs. L. Rostek has resigned her position at the Royal Adelaide Hospital Pharmacy Department.

Mr. R. Cawte is now recorded as manager for B. W. & F. P. Hayter at Torrens Road, Bowden.

Mr. M. Conigrave has returned to South Australia. He spent July in Burra under engagement by Mr. R. Wickes.

Messrs. R. Brice and D. Farley have resigned their hospital positions and transferred to Victoria.

Mrs. L. Gilchrist assisted Mr. R. Brougham, of Mitcham, and Mr. T. Wigley, of Torrensville, during July.

BIRTHS

Warden-Flood (nee Glastonbury).—At Calvary, on June 26, to Val and John—a daughter (Andrea).

King.—At Calvary Hospital, on July 3, to David and Peggie—a daughter.

Duggin.—On July 3, to Jan and Ivan—a daughter (Katherine Seymour).

Fitzgerald (nee Barnett).—On July 15, at Henley Community, to Helen and Ian—a son (Paul Arthur).

OBITUARY

Moody.—On July 12, at hospital, Claude Charles, husband of Ivy Gladys Moody, of 21 Devonshire Street, Hawthorn, and father of Gwen and Marjorie, and formerly an Inspector for the Pharmacy Board.

DRUG ADDICT REMANDED

After a court hearing before Mr. R. J. Coombe, P.M., a 30-year-old man, who admitted that he was a drug addict, was remanded in custody for a probation officer's report.

The defendant, Kenneth Percy Goodlet, unemployed male nurse, of no fixed address, pleaded guilty to a charge of having carried a deleterious drug—ether—at Adelaide on June 19.

Sergeant L. D. Brown, prosecuting, said that when Goodlet was released from prison on June 19 he went to a hiding place in the parklands and took possession of four bottles of ether, which he had hidden before he had been sent to gaol.

The prosecutor said that Goodlet booked in at the Grosvenor Hotel, city, on the same day, saturated his handkerchief with ether, and inhaled the fumes.

SOUTH AUSTRALIA—Continued

The manager of the Grosvenor became aware of this and notified the police.

When the police arrived there was a strong smell of ether, Sergeant Brown said.

Goodlet admitted in court that he was a drug addict and needed treatment.

Sergeant Brown said that Goodlet had 14 convictions, including four for offences relating to drugs and one for dishonesty.

CENTENARY OF DRUG FIRM

Vox, in his feature column "Out Among The People" in the "Advertiser" on July 19, supplied some interesting data concerning Birks the Chemist, which will celebrate its Centenary in August this year.

Vox obtained the information from Mr. Edgar V. Lawton, the Chairman, who joined the firm as an apprentice in 1925.

The firm was founded by pioneer pharmacist George Napier Birks in a small tent at Wallaroo Mines in 1861. He was joined by his brother, William H. Birks.

The business quickly expanded, and they were able in 1875 to open a shop in Rundle Street, Adelaide. A year later they transferred to the now familiar Gawler Place-Rundle Street corner.

A third brother, Charles, founded the Adelaide departmental store of Charles Birks & Co.

In the early 1900's the chemist business was bought by a member of a well-known S.A. family Mr. Percy Magarey, who formed Birks-Chemists Ltd. in 1912.

Other foundation Directors were Messrs. A. K. Newbery, W. T. Magarey, D. D. Magarey.

Present Directors with Mr. Lawton are Mrs. Elsie M. Magarey (widow of W. T. Magarey) and Mr. Kenneth Wall, who joined Birks-Chemists nearly 30 years ago.

Mr. George M. Dixon, who died recently at 63, helped to organise the Centenary on the eve of his 50 years with the company.

FIRST AID

An excellent example of the value to the public of pharmacists being trained, in their student days, in a St. John Ambulance first aid course occurred on July 17.

Robert McGlone, aged 15 years, was cutting meat in Mitchell's butcher shop, Main North Road, Enfield, whilst using a six-inch-blade sharply pointed knife. The knife slipped from his hand and the point entered his left-hand groin and cut the femoral artery.

The assistant manager, Mr. Clark Whittington, realised the dangerous situation and ran about 20 yards to the branch pharmacy of Mr. C. H. Freeman.

At his request the manager, Mr. Don Buik, and his fourth-year apprentice, Mr. Barry Schultz, ran back to the butcher's shop and found the victim on the floor in a semi-conscious condition.

Mr. Buik searched for and quickly found the vital pressure point, and so stemmed most of the flow of blood.

He told Mr. Whittington how to take over the application of pressure, and proceeded to raise the patient's feet and to protect the head from the cement floor.

Meantime, another butcher's assistant telephoned for an ambulance, which very quickly arrived, and the driver, who was alone, applied pressure bandages with Mr. Buik's assistance. He also notified base to alert the hospital.

Mr. Schultz accompanied the patient during the three-mile journey to the Royal Adelaide Hospital. The trip was not without incident, because the patient partly regained consciousness and had to be restrained to keep him on the stretcher. An immediate blood transfusion was given to combat the loss of about two pints of blood.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of South Australia met at 27 Grenfell Street, Adelaide, on June 19, at 7.45 p.m.

Present.—Mr. D. C. Hill (President) in the Chair, Messrs. L. A. Craig, E. F. Lipsham, R. C. McCarthy, B. F. Mildren, B. L. Reynolds, and the Registrar.

Report of the President.—The President stated that since the May meeting he had attended three gatherings in his capacity of President of the Pharmacy Board. They were: (1) The Governor's levee. (2) Annual General Meeting of the Australian College of Education at the University of Adelaide, which had been addressed by the Rt. Hon. the Prime Minister. (3) The opening ceremony of the Association of Veterinary Surgeons held in Union Hall at the University of Adelaide.

The President gave a brief resume of each, and his action in attending as Board representative was endorsed by Board members with appreciation.

Annual Practising Fee.—The Treasurer (Mr. McCarthy) moved the following motion of which he had given notice at the April meeting, viz.:

"That the annual fee for a practising certificate be increased from £2/2/- to £3/3/-, commencing from the first of January, 1962."

The motion was seconded by Mr. Reynolds.

Mr. McCarthy then submitted a comprehensive report covering the financial position of the Board in recent years, and referred to the deficit for the year 1960. He anticipated a larger deficit for 1961, at the end of which year he thought that the Board's reserve would possibly be in the vicinity of £1000.

Mr. Lipsham opposed the motion, submitting that there were sufficient funds in hand to meet all Board contingencies at the present time.

The Treasurer submitted further detail on estimated expenditure, but the motion was lost on a vote being taken.

Legal Opinions.—Letter to a pharmacist advising that the Board's solicitors have stated that the Board should not expend its revenue in obtaining legal opinions for an individual pharmacist on a matter which includes his private and personal affairs, and that such opinion should be obtained by the pharmacist from his own legal advisers; also, that the proposed course of action of the pharmacist appears, on the information submitted, to contravene the provisions of the Pharmacy Act.

Administration.—Mr. Lipsham moved the following motion which he had reworded at the suggestion of the President, after notice had been given by him at the May meeting, viz.:

"That the Board requests that difficulties inherent in administration be reported to the Board as quickly as possible."

The motion was seconded by Mr. Mildren.

In support of the motion, Mr. Lipsham stated that he was concerned in particular with two items, namely: (1) the authority to use the Boards' seal and (2) the Board had not been informed of the delay in the inspections of pharmacies for essential equipment to allow starting dates to be fixed.

Mr. Lipsham stated that any delays which occurred in administration should be reported at the next following Board meeting.

At the invitation of the President, the Registrar spoke to the meeting on the difficulties of administration and the reports which he had made from time to time to the President. Some of these had been considered of a

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*'Eskamel' is a trade mark

EM: TA41A

SOUTH AUSTRALIA—Continued

minor nature and had not been brought to Board meetings by the President, using his discretion in such cases.

The President also spoke of difficulties in administration which he and the Registrar had been able to clarify as soon as practicable.

Messrs. Reynolds and Mildren also made reference to the satisfactory administration of the office from their own experience.

The motion was carried, Messrs. Craig, Lipsham and Mildren voting in favour, and Messrs. McCarthy and Reynolds against; the President abstaining.

Victorian Requirements on Pharmacy Equipment.—Letter to the Pharmacy Board of Victoria requesting copy of Regulations and in particular any other Board directive regarding essential equipment in pharmacies both for training and otherwise. Relevant copies forwarded.

The President took the Victorian Poisons Regulations, 1930, the Schedules to the Poisons Act, a letter regarding approval of premises for practical training, form of application for approval of premises, and certificate of approval of premises for practical training, for examination and report to the July meeting.

Definition of Prescription.—Letter from the Pharmacy Board of Victoria asking if there is a definition of the word "prescription" in the South Australian Pharmacy Act or legislation dealing with poisons, dangerous drugs or restricted drugs. The Registrar was directed to reply that there was no definition in the legislation mentioned and the administration was dependent upon the dictionary meaning of the word.

Mr. McCarthy agreed to collaborate with the Registrar in forwarding the reply particularly in relation to his position as inspecting pharmacist of the Department of Public Health.

South Africa.—Letter from the Pharmacy Board of Victoria asking the present attitude of the South Australian Board to applications from South Africa. The Registrar was directed to reply that there had been no change in the Board's attitude to applicants from South Africa. This was governed by portion of the Regulations which dealt with "persons with unrecognised qualifications," which had been made following the passing of the amending Act in 1952.

Apprentices.—The following motion was submitted by Mr. Lipsham, notice having been given at the February meeting, viz.:

"That in 1962 the list of equipment required in pharmacies employing apprentices be extended to include the installation of a water or refrigerator type cooling system which reaches the dispensary area."

If the basic idea is acceptable, then further decisions will be necessary—such might be:

- (a) compulsory or optional in all such pharmacies,
- (b) compulsory only when the premises lack a back entrance door,
- (c) compulsory only when the premises lack both a back entrance door or a window,
- (d) compulsory only with new enrolments."

Letter from Mr. S. W. Fewell, of the Commonwealth Department of Health, forwarding list of C.S.L. products listed as pharmaceutical benefits, together with storage temperatures.

In view of the suggestion by Mr. McCarthy at the April meeting for the possible introduction of refrigerated storage in pharmacies to serve a dual purpose, consideration of the matter contained in the motion, of which Mr. Lipsham gave notice at the February meeting, was deferred to enable members to consider the list of products requiring refrigerated storage and the possible impact of the requirements on retail pharmacists.

I. Grego.—Letter from the University of Adelaide, advising extent of recognition of qualifications of Mr. I. Grego. The effect was that Mr. Grego would be taken into account as a person with unrecognised qualifications, and it would be necessary for him to be examined for status by Board representatives when he came to South Australia. The Registrar was directed to advise Mr. Grego accordingly.

Galenical Exercises:

- (a) Set III.—Mr. Lipsham tabled a report on the result of his checking of this set, and consideration was deferred until the July meeting to enable members to examine the contents of the report. Mr. Lipsham said that the unsatisfactory work of one apprentice called for some early action, and it was agreed that the apprentice concerned should be called before Messrs. Mildren and Craig at an early date to explain her difficulties in this practical work.
- (b) Set IV.—Mr. Mildren advised that Set IV requirements had been despatched to masters on June 9 for their apprentices, due for return at the Practical Experience examination. Due to the three weeks vacation from the end of the first week in August, it was decided that the Practical Experience examination should be held on August 30, provided that the Senior Lecturer was in agreement from the departmental point of view.

Finance.—Accounts totalling £21/0/9 were passed for payment.

Reminding circular to registered pharmacists who had not taken out current practising certificates and advising that any who is found to be carrying on business without a current practising certificate may be prosecuted without further notice.

Inspections and Actions.—E. C. Sauer and employee, Mrs. L. Wright: Letters to and from Messrs. Pickering, Cornish & Abbott authorising the briefing of Mr. C. H. Bright, Q.C., in the forthcoming appeal, and acknowledging stating that the appeal has been instituted, but the hearing not yet fixed. The Registrar said he understood that the date would probably be the first Monday in August.

The Registrar stated that a retail pharmacist had not taken out a practising certificate for 1961, and accordingly the Inspector had been directed to examine the premises to ascertain if the pharmacist was in charge while not holding a current practising certificate. The Inspector's report indicated that the pharmacist had not been able to produce a certificate and stated that he had overlooked forwarding his cheque for such. The Registrar stated that within ten minutes of Mr. Moody's inspection the pharmacist had called at the office and paid his current fee. In view of the correction of the position by the pharmacist, it was decided not to institute legal action on this occasion, but to write him informing him of the serious view taken by the Board and that similar action in future would lead to prosecution.

Advertising.—A report had been received of unprofessional advertising by a retail pharmacist. The Registrar stated that he had advised the President of the complaint and had been authorised by the latter to direct Inspector Moody to inspect the premises and report thereon. Mr. Moody's report was tabled and indicated that the front of the premises bore a series of cheap sign writing in coloured water paints.

Mr. Lipsham stated that he had heard of the matter and had approached the pharmacist concerned.

The President pointed out to Mr. Lipsham that an approach should not have been made by a Board member between meetings without the authority of the Board first being obtained, and particularly as the Inspector had been instructed to carry out an inspection in accordance with the Regulations.

At this juncture Mr. Lipsham left the meeting due to the late hour and necessity to use public transport.

SOUTH AUSTRALIA—Continued

The matter was then further discussed, and it was noted that the Inspector's report did not refer to the sign "We have the clues on dispensing."

After further discussion it was resolved that a letter be written to the pharmacist concerned drawing his attention to the advertising of dispensing services and also the use of the letters "A.U.A." other than as described in the "Instructions to Associates of the University of Adelaide" (Diploma in Pharmacy), on the control of the use of such letters.

Country Inspections.—Letters to country pharmacists advising Board decisions following inspections of their premises. Further letters were authorised where relevant matters had not been attended.

Register.—The Registrar was authorised to remove the name of George Miller Dixon (deceased) from the Register.

Perth P.A.A. Conference.—The President stated that due to A.N.Z.A.A.S. having decided to hold their next Congress in Sydney in August, 1962, it was probable that the Perth P.A.A. Conference would be further postponed.

Assignment of Indentures: 1.

Completion of Indentures: 1.

Registration of Indentures: 6.

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of South Australia met at 27 Grenfell Street, Adelaide, on June 13, at 7.45 p.m.

Present.—Mr. K. D. Johnson (President) in the Chair, Messrs. S. W. Fewell, E. F. Lipsham, R. B. Martin, D. F. J. Penhall, R. N. Spafford, and the Secretary.

Correspondence.—To Mr. J. M. Dixon expressing sympathy in recent bereavement (father).

Royal Adelaide Hospital. Letter to the Secretary, Society of Hospital Pharmaceutical Chemists of Australia (S.A. Division), recommending that instruction on labelling, issued by the Medical Superintendent at the Royal Adelaide Hospital, be accepted by members.

Constitution and Rules. Letter to Mr. S. A. Downie expressing appreciation of valuable assistance so readily given in redrafting the Constitution and Rules, for printing, in conjunction with Mr. Lipsham.

Mr. Fewell stated that he had carefully examined the redraft and commended the effort of Messrs. Lipsham and Downie. He agreed in the main with the suggestions for the alteration, but submitted several proposals which the meeting accepted for incorporation in the draft.

Mr. Spafford suggested that the new publication should include the basic rules governing the acceptance and award of honours by the Council, and Mr. Penhall asked that the matter brought forward by Mr. K. G. Phelps at the previous meeting, regarding the constitution of the Council, be kept in mind.

The President thanked Mr. Fewell for his examination of the redraft, and, with the suggestions of Messrs. Fewell, Spafford and Penhall, it was handed back to Mr. Lipsham to draft the necessary motions for the Annual General Meeting, to implement the proposal for a publication of up-to-date revised rules.

Metric A.P.F. and South Australian Hospitals. Mr. Lipsham stated that he had contacted Mr. P. L. Jeffs, pharmacist at the Queen Elizabeth Hospital, who had

originally suggested the publication of a metric A.P.F., and the latter had advised that such was no longer required at his hospital. This was said to be due to the medical students being trained in the metric system and prescribing therein, and the pharmacy staff working accordingly and to the metric formulae on the containers.

The President stated that he was surprised to receive the information in view of the original approach by Mr. Jeffs, and before the item was removed from the agenda he thought he should speak to Mr. G. L. Anderson at the Springbank Repatriation Hospital, who had also been interested.

Chiropodists.—Letter from the Society of Pharmaceutical Chiropodists, asking for appointment of a Society representative on its Council. It was resolved that Mr. R. N. Spafford be the Society representative on the Council of the Society of Pharmaceutical Chiropodists until further notice.

Term of Office of Councillors.—Consideration of request by Mr. K. G. Phelps, at May meeting, that some attention should be given to the possibility of a longer term of office for Councillors.

Mr. Spafford suggested that if the Rules provided for the retirement of members of the Council on the basis of 3-2-2 years, each would thus be given three years' service compared with the present two before re-election.

Mr. Penhall asked that some thought be given to representation of various branches of pharmacy on the Council. He said that he was prompted to do so by the possibility of the largest branch, i.e. retail pharmacy, being excluded from Council by the present election, which would remove all balance from representation of members.

Reference was also made to the possibility of the President being appointed for a longer period of two or even three years, as this was in the nature of a semi-permanent office.

In deferring further consideration until the July meeting, due to the absence of Mr. Phelps, the President stated that he intended to make some comments on the matter at the Annual General Meeting in August.

The Secretary reported receipt of a cheque for £2/2/- from Mr. A. Reusch, of Nuriootpa, as a donation to the Heart Appeal Fund. The Secretary was directed to forward the cheque on behalf of Mr. Reusch.

Sterilisation of Eye Drops.—The Vice-President (Mr. Martin) stated that Mr. P. L. Jeffs, of the Queen Elizabeth Hospital, telephoned him during the absence of the President in Brisbane regarding sterilisation of eye drops. He stated that Mr. Jeffs had signified his willingness to deliver a lecture on sterilisation by pharmacists.

The matter was discussed at some length, and it was decided that the President should discuss the matter with the Senior Lecturer and Mr. Jeffs, and make a statement to the next meeting on the result.

A.N.Z.A.A.S. Congress in Brisbane.—Separate reports were received from the President and Mr. Reynolds.

The President advised that the meetings of the Pharmacy section had been well organised and the pharmacy papers on the whole were quite good. Several had emanated from Professor Wright's department of the University of Sydney, and some also from industry, and in particular, he made reference to the excellent effort of the submission by Mr. Reynolds, the Adelaide Senior Lecturer. These had made a profound impression in Section "O". In his opinion Mr. Reynolds was pursuing the correct policy and had reached a high position in Australian pharmaceutical teaching.

The new organisation known as the Australian Pharmaceutical Science Association had been formed as a separate body as a result of the Brisbane meetings, and the President stated that he had stood alone in voicing opposition to the proposal, thus reflecting the attitude

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SOUTH AUSTRALIA—Continued

of the present Council on this further breaking up of Australian pharmacy.

The President stated that he had been given a copy of the draft constitution of the new Association.

The President also said that the P.A.A. Executive had met in Brisbane and heads of pharmacy teaching departments and Presidents of State Societies (except Western Australia) had been present. Research scholarships had been considered.

It had been decided at the conclusion of Congress to hold the next A.N.Z.A.A.S. meetings in August, 1962, in Sydney, as this would be the 75th anniversary. This would no doubt mean an alteration to the Perth P.A.A. Conference date.

Appointment of Lecturers in Place of Messrs. M. P. Connell and R. H. Billing.—Letters to Messrs. B. J. Holland and R. H. Parker advising appointments for 1961.

Provision of Space for Museum Within the Reorganised Pharmacy Department.—The President stated that he had not had an opportunity to again speak to the Senior Lecturer on this matter, but he intended to discuss it with him as early as possible, as Mr. Reynolds was in need of direction on the re-storing of articles at present temporarily located in the Biochemistry Department.

Galen Prize.—Letter to the Secretary, Lodge Galen, accepting donation of prize and expressing members' appreciation, and asking that a representative of the Lodge discuss details with Mr. Spafford or the Secretary. Mr. Spafford stated that he would take the initiative in discussing details with the Lodge Secretary.

N.A.P.S.A.—Letter to the Hon. Secretary, N.A.P.S.A., acknowledging receipt of Association's minutes.

Mr. Martin submitted observations of various items of interest contained in the minutes, and it was noted that relevant Australian students had been generally critical of the apprenticeship system and also the upward trend of tuition fees.

The report was received and Mr. Martin thanked for his comprehensive summary.

Recruitment to Pharmacy.—Article in "The Pharmaceutical Journal" (Great Britain) of March 18, 1961, regarding recruitment to Pharmacy in Great Britain: The article was tabled, and the Secretary stated the Senior Lecturer's reason for forwarding the matter for consideration, viz.: the adoption of similar publicity in South Australia. Consideration was postponed until the July meeting.

The President tabled an article which appeared in the "Young Australian" on pharmacy as a profession. He said that the article had been prepared by a journalist on the staff of the publication after conversation with him, and had been checked by the Secretary for detail before printing. Members expressed satisfaction with the publication.

Commencement of Operation of Matriculation for Diploma Course.—Consideration was deferred until the July meeting pending the outcome of discussion at a meeting of the Board of Studies in Pharmacy to be held on June 15.

Finance.—Accounts totalling £805/11/1 were passed for payment.

New Members Elected.—Messrs. F. C. Graham and G. J. Walker and Miss C. E. Phillips.

Modern Pharmacy Lectures.—The Secretary stated that 84 replies had been received from pharmacists intending to be at the lectures. Mr. Reynolds had been advised accordingly. Arrangements had been made for coffee to be served.

The President stated that he would investigate the possibility of the publishing of a report of the lectures, and would submit his views to the July meeting.

Other Functions for 1961.—The Secretary stated that a reply had not yet been received from the Parkside Bowling Club. Mr. Spafford stated that he would pursue the matter personally and report to the July meeting.

Consideration was given to various other suggestions for functions during the year, and it was finally decided that the President, Mr. Penhall and Mr. Spafford should inquire into the following two proposals and report in detail to the next meeting:

- (a) a Health Church Sunday in conjunction with the British Medical Association and nurses; and
- (b) a birthday dinner/dance in September.

Annual Election.—The Secretary stated that the ballot papers were being forwarded to members on June 14, and he had already arranged for the Returning Officer to lock the ballot box.

Annual General Meeting.—The Secretary stated that Balfour's Dining Room had been reserved for Tuesday, August 22, at 8 p.m.

He also suggested that the Director of the Tourist Bureau, Mr. P. Polnitz, be asked to address members if possible with a film of lesser known South Australian resorts. Approved.

JULY MEETING OF THE COUNCIL

The Council of the Pharmaceutical Society of South Australia met at 27 Grenfell Street, Adelaide, on July 3, at 7.45 p.m.

Present.—Mr. K. D. Johnson (President) in the chair, Messrs. S. W. Fewell, E. F. Lipsham, R. B. Martin, D. F. J. Penhall and R. N. Spafford.

Apologies.—Mr. K. G. Phelps (absent on holidays) and the Secretary (sudden indisposition). Mr. Penhall agreed to act as Minutes Secretary in the absence of the Secretary.

Council Election.—Mr. Penhall read a letter from the Returning Officer, advising the result of election of Councillors as under:

R. N. Spafford	223 votes
D. F. J. Penhall	216 "
R. B. Martin	212 "
K. G. Phelps	173 "
K. M. Rohlfing	126 "
I. J. Evans	113 "
B. Garforth	45 "

The letter declared that the first named four members were duly elected for the ensuing two years. The Returning Officer's report indicated that ballot papers had been sent to 598 members and 277 were returned, constituting a 46.3% effective vote. In 1960 there was a 50.7% effective vote. Letters had been sent to all candidates advising election results.

Election of Officers.—The President then declared all offices vacant and Mr. Penhall took the chair as acting Secretary.

(a) **President:** Mr. K. D. Johnson was the only nominee for the office of President, and was declared unanimously elected. Mr. Johnson then took the chair and thanked members for the confidence which they had shown in him.

(b) **Vice-President:** Mr. R. B. Martin was the only nominee for the office of Vice-President, and was declared duly elected.

(c) **Honorary Treasurer:** Mr. K. G. Phelps was the only nominee for the office of Honorary Treasurer, and was declared duly elected.

Mr. Fewell, on behalf of other members of the Council, congratulated the four members who had successfully emerged from the general election and also the office-bearers who had been elected.

Constitution and Rules.—The report prepared by Mr. Lipsham and circulated to members was considered,

SOUTH AUSTRALIA—Continued

together with suggestions by Messrs. Phelps and Penhall respectively as follows:

- (a) Arrangement of Council so that elected members should remain longer in office, and
- (b) grouping of candidates at elections to provide for representation of each branch of pharmacy.

Members generally agreed with the present representation of seven on the Council, but agreed that the retirement should be on a 3-2-2 basis, which would give each elected candidate three years in office. However, members could not agree on Mr. Penhall's proposal for dissecting the Council into the various branches of pharmacy.

Further consideration was postponed until the August meeting as Mr. Lipsham agreed to prepare a further statement, to be circulated, covering the detail discussed at the present meeting in this matter. Mr. Lipsham agreed to take into account in his report membership fee and Benevolent Fund contributions.

Disapproval was expressed at the lay-out of the ballot paper for the election just completed. It was decided that the Secretary should obtain details on the type of ballot papers used in the State and Federal elections and report at the next meeting.

Metric A.P.F. and South Australia Hospitals.—The President stated that he had not had an opportunity to discuss the matter with Mr. G. L. Anderson of Springbank Repatriation Hospital, but would do so and make a statement thereon at the August meeting.

Chiropodists.—Letter to the Registrar, Society of Pharmaceutical Chiropodists of South Australia, advising appointment of Mr. R. N. Spafford as Pharmaceutical Society representative on its Council.

Year Book of the Pharmaceutical Society of Victoria.—Mr. Lipsham referred to various items contained in this publication, including a course in pharmacy administration. He submitted that South Australia could well encourage this idea in this State. In deferring further consideration of detail, the President answered a question by Mr. Spafford which sought the reason for the non-approach to industry for funds in this State while other States made such approach. Mr. Spafford was advised that official pharmacy in South Australia had considered that members of the profession here should solely support any official undertaking and that outside aid should only be sought if absolutely necessary.

Sterilisation of Eye Drops.—This matter was deferred until the August meeting, when the President would report on discussions with the Senior Lecturer and also Mr. P. L. Jeffs of the Queen Elizabeth Hospital.

Museum in Re-organised Pharmacy Department.—The President spoke of a further discussion with the Senior Lecturer during which the latter had agreed to erect a shelf in his office for the storage of carboys, portraits, and other valuable pieces. There was an acute lack of space in the Department, but the President said that by judicious arrangement a satisfactory position could be reached with the storage. It was agreed that the matter should be deleted from the agenda and left in the hands of the President for personal negotiation with the Senior Lecturer.

Galen Prize.—Mr. Spafford reported on investigations by Mr. Lipsham and himself into the matter of awarding this new prize each year. The suggestion was that the students obtaining six highest places as a result of the Practical Experience examination should be considered by the prizes joint sub-committee. It was agreed that they should assess the work of the six best examinees in conjunction with their practical galenical work and make a decision and recommendation accordingly for the award.

It was resolved that the recommendation put forward regarding the award of the Galen Prize be adopted and that Lodge Galen be advised accordingly.

Article in "The Pharmaceutical Journal" of March 18, 1961, regarding recruitment to pharmacy in Great Britain.—The comments circulated by Mr. Lipsham were considered and it was decided to write to the Pharmaceutical Society of Great Britain and ask for any details they may care to supply on methods of recruitment to a pharmacy career each year. The matter would be further considered on receipt of detail from Great Britain.

Finance.—Accounts totalling £421/12/6 were passed for payment.

Modern Pharmacy Lectures.—The President stated that 84 pharmacists had signified that they would be attending the lectures and the actual attendances were (1) 81; (2) 87; (3) 58.

The Senior Lecturer had been quite satisfied with the response and had signified that he would be agreeable to the Council having reports of his lectures duplicated for supply to all country members and also to such metropolitan members as requested supply.

Other Functions for 1961

Bowl Competition.—Mr. Spafford stated that he was not yet in a position to add any further detail to this matter, but was continuing negotiations.

Proposed Health Church Sunday.—The proposal was agreed to in principle and the President stated that he would contact Mr. J. C. Measday for preliminary discussions as Mr. Measday was an active worker in Anglican church affairs. The President would report to the August meeting.

Birthday Dinner-Dance.—Mr. Spafford said that the South Australian Hotel had quoted £3 a person for a dinner-dance, such quote to be all inclusive of dinner with set menu, pre-dinner drinks, savouries and music. It was agreed that the cost was too high. Mr. Spafford said that he would contact the South Australian Hotel prior to the next meeting on charges for the respective components. He was also asked if he would ascertain if the hotel will cater for small numbers if the attendance was restricted.

The meeting authorised the President and Messrs. Penhall and Spafford to discuss the matter and implement the proposal with the Secretary.

During discussion, it was generally agreed that members should order and pay for their own drinks and that consideration should be given to the possibility of sending out invitations from the President and members in envelopes bearing their home addresses.

Annual General Meeting.—The Secretary had advised that Mr. P. F. Polinitz, Director of the Government Tourist Bureau, had consented to address the meeting on lesser-known South Australian tourist resorts, with emphasis on the development of Central Australia, upon which he had been recently working personally. He would show suitable films.

British Medical Association.—The President stated that he had attended the British Medical Association's dinner on invitation. It was quite a good evening. It was noted that Dr. H. R. Oaten had recently been appointed State Vice-President of the Association. Dr. Oaten was a former pharmacist, and it was agreed that a personal letter of congratulation be forwarded to Dr. Oaten.

Office Accommodation.—The President stated that the present arrangement for office accommodation at Alexandra Chambers would expire on August 31. He stated that he had already discussed the matter with the President of the Pharmacy Board, and the following decisions were reached:

- (a) That the President, in conjunction with the President of the Pharmacy Board, should further investigate the rental of premises during the present week;
- (b) that the President should contact various land agents for suggestions; and
- (c) that Council should give further consideration in the future to the eventual purchase of property for its own building.

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WESTERN AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal correspondent in W.A., Mr. F. W. Avenell ('phone BA 4082).

Mr. G. J. Hollyock has purchased Craven's Pharmacy, Perth, and **Mr. V. T. Spiro** has purchased Mr. Hollyock's pharmacy at Guildford.

Mr. J. Burke, of Gosnells, has purchased the Piccadilly Pharmacy from Mr. N. Steere. Mr. Neville Crump is managing the pharmacy.

Mr. W. F. Patterson has purchased Mr. Slaven's pharmacy at Wembley. Mr. Slaven has accepted a position at Hollywood Hospital.

Mr. R. F. MacDonnell has purchased the Post Office Pharmacy of Mr. H. S. Wheeler at Scarborough.

Mr. S. J. Wilson has purchased Mr. V. Turner's pharmacy at Victoria Park.

Mr. H. A. Butler has purchased Mr. N. Lee's pharmacy at Boulder.

Mr. H. Longden has opened a pharmacy at Hillview, Bentley.

Miss J. E. Shepherd, who recently returned from a visit to the Eastern States, has now gone to Queensland for a few months.

Congratulations to **Mr. L. Rappeport** on his appointment as Chairman of the Marriage Guidance Council of W.A.

Mr. and Mrs. M. J. Comparti, of Koyonup, left on the "Strathnaver" for England on July 14. They expect to be away for about 12 months. Miss Lola Giles is in charge of the pharmacy.

Mr. G. P. Green, a graduate of Perth Technical College, who was for some years a pharmacist in Port Moresby, Papua, has opened a pharmacy at Manly, New South Wales.

Gary Hastwell and **Bryan Elliott** have returned to Perth from their 20,000-mile car journey, including every State.

Miss Margaret Spelman, formerly of Perth, is now Mrs. Roberts and is residing in Brisbane.

Obituary.—We regret having to report the sudden death of **Peter H. Sargent** at Maylands on July 19. He had been in poor health for some time. Peter was the son of the late Mr. and Mrs. L. O. Sargent and brother of John, now of York. He was 37 years of age.

Lecture on Diuretics

An interesting lecture evening, held by courtesy of E. R. Squibb & Sons (Aust.) Pty. Ltd. and Rumbles Ltd. at the latter's warehouse on June 28, was well attended by Western Australian pharmacists.

The evening included the screening of an excellent scientific film made available through the courtesy of E. R. Squibb & Sons (Aust.) Pty. Ltd., entitled, "Oral Diuretics in Clinical Medicine," followed by a most informative address presented by Dr. R. L. Leedman.

As the principal purpose of the lecture was to enable the pharmacist to become better acquainted with the overall use of diuretics, Dr. Leedman briefly covered the following fields in his lecture:—

1. The history of diuretics.
2. Their function in medicine.
3. The future of diuretics.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Western Australian Branch of the Guild met at Guild House, 61 Adelaide Terrace, Perth, on July 11, at 7.45 p.m.

Present.—Messrs. G. D. Allan (Chair), W. G. Lewis, S. J. Wilson, R. W. Dalby, G. H. Dallimore, R. I. Cohen, R. D. Edinger, A. W. Rock, H. J. Stone.

Correspondence.—From Public Relations Secretariat, concerning a political campaign. The initial organising had been carried out and plans were being made to arrange for the necessary deputation.

From Victorian State Branch, suggesting an interchange of observers at S.B.C. meetings. Whilst realising the value behind this idea, the expense involved as far as W.A. was concerned would make it difficult for this State to participate. Neighbouring States could try out the idea.

From the State Minister for Health, in reply to our deputation. The Minister could not agree to our request, but suggested that there was room for closer liaison between the country doctor and the local chemist.

From the Director-General of Health, accepting the invitation extended to him when he next visits W.A.

From a country chemist, concerning a proposed medical centre. Matter referred to the B.M.A.

Financial.—All members were financial at June 30 and the year ended showing a small surplus. Members voted in favour of an increased subscription. All accounts for subscriptions for 1961-62 had been sent out.

New Members Elected.—Messrs. Victor Tom Spiro, Guildford; Herbert Longden, Bentley; William Patterson, Wembley.

Branch.—Mr. J. Burke, Piccadilly Arcade, Perth.

Federal Delegate's Report.—Mr. Dallimore reported on the result of the special meeting of the Federal Council held in June. Explanation was given for the reason for the proposed political campaign.

Negotiations were still proceeding with the Repatriation Department concerning terms and conditions for a new agreement. A special committee was appointed to negotiate with the Department.

Authority had been given to proceed with the erection of a Guild House in Adelaide.

A meeting of the Federal Executive had been called for July 16 in Sydney.

Pricing Officer's Report.—Mr. Lewis presented a new scale of dispensing fees and after discussion it was accepted. The date recommended for the introduction of the new fees was September 1.

The retail price list was increasing, but the cost of the production of this list should be balanced by subscriptions.

Gossamer was still advertised on TV. at 10/-, but the company reported that this price would be deleted in August. The new price for Perfect Net would be 9/9 and would show a full mark-up.

Inquiries were to be made as to the price charge for containers for Repatriation dispensing.

Trade and Commerce Report.—Figures to hand showed that W.A. had the best coverage for Veldown Tissues.

The suggestion that a disposal baby napkin be produced as a "Chemists' Only" line to be discussed with the Federal Merchandising Department.

WESTERN AUSTRALIA—Continued

Mr. Rock produced the agenda for the Federal Trade and Commerce Conference and the opinion of the State Branch Committee was expressed on the various remits.

Annual General Meeting.—The annual general meeting of the W.A. Branch of the Guild was fixed for Thursday, August 17, at Rumbles Ltd.

Returning Officer.—Mr. W. G. Lewis was appointed Returning Officer, should an election be necessary. Nomination forms for the election of the State Branch Committee to be sent to all members immediately.

Nursery Dryer.—A sample electrical nursery dryer was shown to members of the State Branch Committee. It was left to the individual chemist to decide whether he should stock this line.

The meeting closed at 11.30 p.m.

LABELLING OF DOCTORS' PRESCRIPTIONS

Discussion in House of Lords

Lord Newton said, in the House of Lords on May 2, that it would be inappropriate for the Government to express a view about the Joint Formulary Committee's conclusions on the labelling of medicines (P.J., December 10, 1960, p. 545). The question arose when Lord Archibald asked the Government whether it regarded the recent report of the Committee of the British Medical Association and the Pharmaceutical Society on such labelling as being satisfactory, in view of the fact that its recommendations would involve:

- (1) In the case of its first example, the doctors would have to rewrite on a small prescription form a description of the drug in question;
- (2) in the case of its second example, no adequate information would be available to a doctor, other than the patient's doctor, who might be called in an emergency;
- (3) in its third example, no information would be available either to the emergency doctor or the patient.

Lord Archibald also asked whether the Government realised that a large number of doctors and manufacturing and dispensing chemists were in favour of the full name of the prescribed drug being shown on all containers; that many doctors, with the co-operation of the dispensing chemist, or doing their own dispensing, had for many years followed the practice of fully labelling all containers, with most satisfactory results; and whether, despite the recommendations of the Joint Committee, suitable publicity would be arranged to acquaint patients with these recommendations in line with the widespread publicity to doctors and pharmacists.

Lord Newton (Captain, Yeoman of the Guard), replying, said: "This is entirely a professional matter, and it would be inappropriate for the Government to express a view about the Committee's conclusions or the examples it quotes. It is for the doctor to decide what should appear on the label and to give adequate instructions to his patient, and there would, therefore, be no purpose in publishing to patients the Committee's recommendations."

Lord Archibald, describing the reply as a negative one, said that the matter also concerned patients. The Minister of Health should consider the matter again, he said, because there was widespread interest throughout the country. Many doctors and dispensing and manufacturing chemists were in favour of a general rule being made. Would it not be reasonable, for the benefit of patients, that the general rule should be that all containers should be labelled with their contents, and that it should be left to the discretion of the doctor to with-

hold that information only where he felt that it was essential to do so?

Lord Taylor, adding his plea to that made by Lord Archibald, suggested that it would be of enormous help if the naming were automatic, and the deletion of the name were at the request of the doctor, because the doctor had so many prescriptions to write.

Lord Rea, supporting, suggested that the matter was "something of a hangover from witchcraft, because the relevant professions were rather secretive about it." If he wanted to know whether a pill from box 6142 would mix with one from 7493 he would ask his chemist whether it would kill him or do him good, and it would take the chemist a little time to reply.

Lord Newton replied: "This may be a matter of considerable public interest; but the fact remains that it is a professional matter for the doctors. That being so, I cannot express an opinion on the merits of the case, one way or the other. It is for the doctors to do as they think fit. The Joint Formulary Committee said this:

"If it is the wish of the prescriber that the identity of the preparation should appear on the label, he should include with the directions for use on the prescription the desired name or description of the drug."

Lord Latham asked Lord Newton if he thought that the profession would resist any representations made by the Minister.

Lord Newton replied that he could not say what the reaction of the profession would be to representations by the Minister of Health, but he was sure that the Minister would not make representations on a matter which he regarded as being entirely a professional one. Ministers of Health for many years had not sought to interfere in entirely professional matters, and if they did they would be doing something which the great majority of doctors would resent.

Lord Archibald asked Lord Newton if he would convey to the Minister the views which had been expressed in the questions which had been put, and particularly the view that it was not a question only of the right of the doctor, but of the right of the patient to know what he was being asked to take.

Lord Newton promised to draw the Minister's attention to what had been said. But, so far as he knew, if a patient wished to know what was being prescribed for him there was nothing to prevent him from asking his doctor to write on the label what in fact he was giving him.

Lord Latham pointed out that the patient did not know that he was entitled to have the information as to what the medicine was. Part of this request was that he should be informed.

Lord Newton said that anyone who felt strongly about this could say to his doctor, "Look here, I have a lot of pills in my medicine cupboard. I do not want to get them mixed up; so will you please write on the box what it is?"

Lord Archibald: "Patients do not know that they have the right. There is, unfortunately, I think, far too great a respect on the part of patients for the great power and wisdom of the doctor, and they do not know that they have the right to ask for this. The report of the Joint Formulary Committee has been widely publicised to doctors, but not to the public. I ask that the public should be as well informed of their rights as the doctors are informed of the recommendations of the Joint Formulary Committee. If the Government do not know how to publicise to the public the report of the Joint Formulary Committee, they might perhaps consult with Colman, Prentis & Varley, as to how the publicity might be done."

Lord Newton said that the Committee's report had not been publicised by the Government: it had not been a report made to the Minister.

Baroness Horsgrugh: "A great many people, according to my information from doctors, already ask what is in the medicine, and when they are told they do not know in the least what it is."

—From "The Pharmaceutical Journal," May 13, 1961.



TASMANIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal correspondent in Tasmania, Miss Margaret Purdon, care John Fiddy, FitzGerald's Pharmacy, Hobart.

Miss M. Andrews opened a pharmacy in South Hobart recently.

Mr. John Fiddy has opened a branch pharmacy in the Elizabeth Street store of G. P. FitzGerald's Pty. Ltd.

Mr. A. Widdowson, of Kingston Beach, has resumed work after an illness.

Mr. R. Gunton relieved at the E. H. Shield Pharmacy, Penguin, in July.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Tasmania met at 85 Elizabeth Street, Hobart, on July 6, at 8 p.m.

Present.—Mr. A. K. Smith (Chairman), Miss M. L. Williams, Messrs. B. J. Shirrefs, I. B. McLeod, T. A. Stephens, and Registrar, Mr. B. L. Ralph.

Pharmacy Act.—Advice was received from Mr. R. L. Ward that arrangements had been made to dissolve the partnership between himself and his wife.

Therex Tablets. The Registrar was directed to write to Russells Pty. Ltd., 132 Wellington Street, Launceston, advising that it was contravening the Act by selling Therex tablets, and asking the company to return its stocks of the tablets to the wholesalers.

Pharmacy Regulations.—A draft Pharmacy amendment regulation embodying necessary amendments for changes in syllabus, having been fully considered by members of the Board, was agreed to for passing to the Minister.

The Registrar was directed to write to the Pharmacy Boards of South Australia and Queensland and to Professor Wright of the University of Sydney seeking copies of the current Pharmacy Syllabus.

Poisons Act.—

Medallion Cough Balsam. A draft label and formula was received and approved.

Liquid Medication. A draft label and formula was received from Teen Aid Pty. Ltd. for a new Teen Aid liquid medication. The Registrar was directed to advise that the details as submitted complied with the Board's requirements.

Poisons Regulations.—

Prescription Book. The Registrar was directed to forward to the Minister for approval an amendment to Regulation 9 to incorporate the words "or approved recording system" immediately after the words prescription book.

Carbromal, Bromvalone. This matter was carried forward pending a reply from the B.M.A.

It was resolved that on completion of the amendments for control of these products a suitable paragraph be forwarded to the press for publication.

B.P.C. Proposed Alterations.—Details of proposed deletions and additions to the B.P.C. as received from

the Pharmaceutical Association of Australia having been considered by the Board, the Registrar was directed to advise that the Board has no criticisms to make.

Gazettal Date: B.P.C. 1959, B.P. 1960 and Addenda.—Further correspondence on this matter was received from the Commonwealth Director of Health. Mr. Ralph moved, seconded by Mr. Stephens, that the Board seek legal opinion as to how the Pharmacy Board may resolve the official date of acceptance of the B.P. 1960 and B.P.C. 1959 and Addenda thereto.—Carried.

Careers Exhibition.—A letter was received from the Exhibition Committee of the Junior Chamber of Commerce advising of a Careers Exhibition from September 5 to 9 inclusive, with a charge of £25 per bay of approximately 300 sq. ft.

The meeting considered this to be a matter for the Pharmaceutical Society of Tasmania, and it was resolved that the letter be referred to the Society and the Junior Chamber of Commerce advised accordingly.

Sex Hormones.—The Registrar tabled Statutory Rules No. 87 and 88 covering the following amendment to Regulation 9 prescription only:

"Sex hormones whether natural or synthetic and all derivatives and preparations thereof."

The meeting resolved that the Registrar write to the B.M.A. enclosing a copy of these amendments advising that such preparations could only be supplied on prescription and that the prescription must specify the number of repeats with a maximum of five allowable on any one prescription.

The Registrar was directed to forward copies of this amendment to the Child Welfare Clinic of the Public Health Department for circularisation amongst clinics advising that the amendment would include all classes of hormones such as Stilboestrol and advising that a prescription must be obtained.

Equipment.—Mr. Shirrefs tabled a list of apparatus for approved pharmacies for consideration at the next meeting of the Board.

Labelling.—The meeting resolved that the labelling of medicines which are available on prescription only without proper names be considered at the next Board meeting.

The meeting closed at 10.5 p.m.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Tasmanian Branch of the Guild met at 85 Elizabeth Street, Hobart, on June 26, at 8 p.m.

Present.—Messrs. C. A. Robertson (Chairman), I. R. McIntosh, N. G. Dineen, A. Fennell, A. G. Gould, C. B. Dillon, K. H. Jenkins, O. K. Colman, G. M. Fleming, G. S. Copeland, G. Tennyson, and the Secretary.

Welcome.—Mr. Robertson extended a welcome to Mr. Tennyson, Federal Public Relations Director, who had come from Melbourne specially to address the meeting, and also to Mr. Copeland and Mr. Dineen, who had come from Ulverstone and Launceston.

Financial.—Accounts totalling £116/4/11 were passed for payment.

New Member Elected.—Miss Marjorie Emily Andrews, of 486 Macquarie Street, Hobart.

TASMANIA—Continued

Annual General Meeting.—It was agreed that the Annual General Meeting would be held in Hobart on Wednesday, August 23.

Returning Officer.—Mr. A. G. Gould was appointed Returning Officer, and the Secretary was instructed to call nominations and conduct elections for each of the three districts.

North-west Coast District.—Minutes of the meeting of the North-west Coast District held on June 13 were received.

Chemist Only Lines.—The report from the North-west Coast regarding chemist only lines being sold to other outlets was discussed at length. Mr. Copeland stated that there was no definite proof whence the supply came.

Mr. Robertson asked that definite proof be presented before the S.B.C. could take positive action.

After Hours Opening.—The report regarding this position in Burnie was further elaborated by Mr. Copeland.

After discussion it was left for the Secretary to check regarding the opening hours under the Shops Act, after which the North and North-west Coast Districts would be advised and an approach would probably be made to the Department of Labour and Industry to check the position at Burnie.

North-west Coast Annual General Meeting.—It was proposed that Mr. Copeland discuss with his district the holding of their Annual General Meeting on August 14.

Northern District Annual General Meeting.—Mr. Dineen undertook to discuss with his district the holding of their Annual General Meeting on August 15.

Mr. Robertson advised that he, the Secretary and perhaps some other members would attend these meetings.

Kodak Classes.—The meeting expressed appreciation for the work which the Kodak Company had done in arranging classes for pharmacists and their assistants in the handling of photographic equipment. Mr. Robertson considered these instructions were excellent and had given valuable assistance to members. He further advised that an additional class would be arranged for master pharmacists on 35 mm. and projectors in about a month's time.

The meeting asked that a letter of appreciation from both the North and South be forwarded to Mr. George of Kodak (A'sia) Pty. Ltd.

After Hours Pharmacy.—Details provided by Mr. Tennyson were read regarding the financing of an after hours pharmacy.

Mr. Dineen stated that a considerable amount of information had been gathered in Launceston and would be supplied for use by the Branch.

It was decided to further consider this matter with the details which would be received from the Northern District.

Federal Council Meeting.—Mr. Fleming and Mr. Copeland, who attended the Federal Council Meeting, reported on the discussions at that meeting in regard to the Repatriation Agreement, on which final agreement had not yet been reached, with the result that payments would continue as on the old scale until an agreement was reached. A circular regarding the matter will be sent to all members.

Further discussions held regarding the National Health Act were explained. As 79 per cent. of the members voting were in favour of an increased annual subscription, members would be advised regarding the increase.

During the absence of Mr. Eric Scott abroad, Mr. Dallimore would be acting Federal President.

The meeting asked that a letter be sent to Mr. Scott wishing a speedy recovery in health for his wife.

Interstate Liaison.—A letter was received from the Victorian Branch proposing an interchange of members of State Branch Committees and proposed that a special liaison officer be appointed for this purpose or consideration be given to different members attending as observers.

Members thought this was a commendable suggestion and could lead to closer working of the State Branch Committees.

Mr. Copeland moved that we approve the proposal. Mr. Dineen seconded, and stated that an approach should be made to the Federal Council to suggest that some funds be made available to meet the costs of such interchange, and this was agreed to.

Medicines and Drugs.—The schedule of Medicines and Drugs released under the Pharmacy Act was due for reconsideration by Parliament, and it was suggested that a sub-committee comprising the President and Mr. McIntosh be formed, with power to co-opt, to consider the position.

Health Act Section 99.—Mr. Tennyson gave details of a campaign to deal with the approach of chemists towards getting justice under this Act. His remarks were further supported by Mr. Copeland.

After fully discussing this scheme committees were arranged to handle the matter, and Mr. Robertson agreed to be co-ordinator for the undertaking.

Merchandising.—Mr. McIntosh reported that the Federal Trade and Commerce Meeting would be held in August.

The meeting agreed that a remit be forwarded suggesting that a standard of ethics for merchandising chemist only lines should be established.

Mr. Dineen asked that members be sent some form of reminder each month that it was of great importance for them to fully support the chemist only lines.

The meeting closed at 10.45 p.m.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Tasmanian Branch of the Guild met at 85 Elizabeth Street, Hobart, on July 10, at 8 p.m.

Present.—Messrs. C. A. Robertson (Chairman), A. Fennell, K. H. Jenkins, A. G. Crane, A. G. Gould, O. K. Colman, G. M. Fleming, and the Secretary.

Repatriation Agreement.—Mr. Fleming explained details set out in the proposal from the Repatriation Department which had been circulated to S.B.C. members.

After lengthy discussion, it was moved by Mr. Fleming and seconded by Mr. Fennell, that the S.B.C. urge the acceptance of the Commission's proposal on the present agreement in general, but that it would like the negotiators to endeavour to have certain alterations inserted.

Northern District.—Minutes of meeting of the Northern District held at Launceston on June 29 were received and discussed.

After Hour Trading.—The report in the Northern District minutes regarding a pharmacy opening after hours and similar reports from the North-West District were left for the President and Secretary to handle.

Trade and Commerce Conference.—Items on the agenda for this conference were considered in detail, and notes made for the Branch representative.

The meeting closed at 10.30 p.m.



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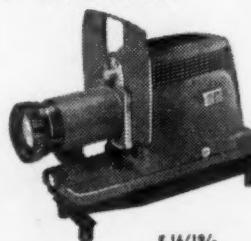
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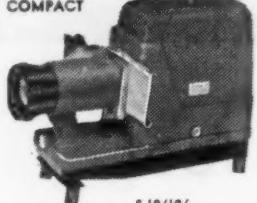
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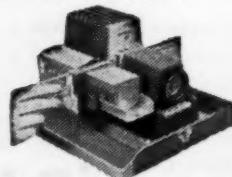


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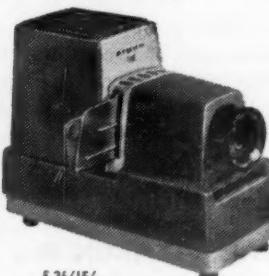
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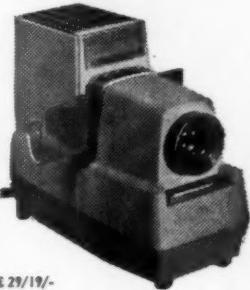
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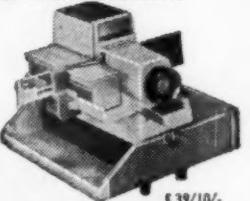
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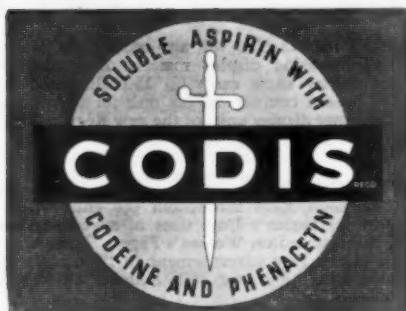
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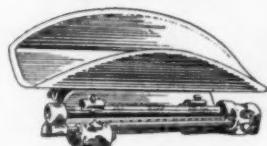
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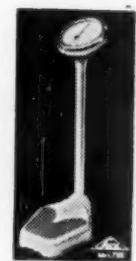
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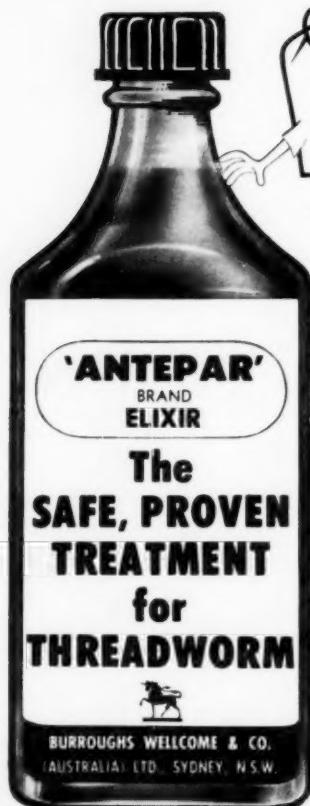
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"Worms mean BIG profits!"

'Antepar' benefits you, profitably speaking, just as it benefits your "worm worried" customers. 'Antepar,' the proven 1 dose a day routine to effectively control threadworm, brings you **profit on cost of up to 112%**. Read your monthly "B.W. & Co. Bulletin" for Special Bonus details.

*and for
effective
merchandising*

Any one of these 'Antepar' sales aids—whether it be a pack dispenser, window or counter sticker, window streamer or showcard, if displayed prominently at the point of purchase will remind your customers to buy 'Antepar.' There are also "Important Information" leaflets available to place on your counter.



BURROUGHS WELLCOME & CO. (AUSTRALIA) LTD., SYDNEY



